We help create great leisure experiences!

- ✔ Expertise in pump and heating solutions for leisure
- ✔ Investing in innovation
- ✔ Providing reliable products to improve your van experience
- ✔ Offering the highest levels of support and service

Heating and Water System Range 2013

Proud to manufacture in the UK

Whale®
Caravan and Motorhome

Water Pumps & Supply | Taps & Showers | Water Heating | Space Heating | Plumbing | NEW Intelligent Control

Whale still leading innovation

Whale offers a professional and personal service. The company's expertise has been built on over 40 years of manufacturing pumps and water system products for the recreational vehicle market.

"At Whale, we consistently strive to provide our customers with innovative, market leading products with professional proactive support services.

In achieving this, our employees will consistently act with integrity and honesty, and radiate a passion for our company, our culture and for our customers."

Patrick Hurst, Managing Director

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Fit Whale throughout your van

Whale manufactures high quality reliable water and heating systems for caravan and motorhomes. Our products are lightweight, durable and proven to provide reliable heating and water supply to allow you to have great leisure experiences. All this is backed up by a dedicated Whale Support team on hand to provide spares and technical assistance when you need it.

Easy Install

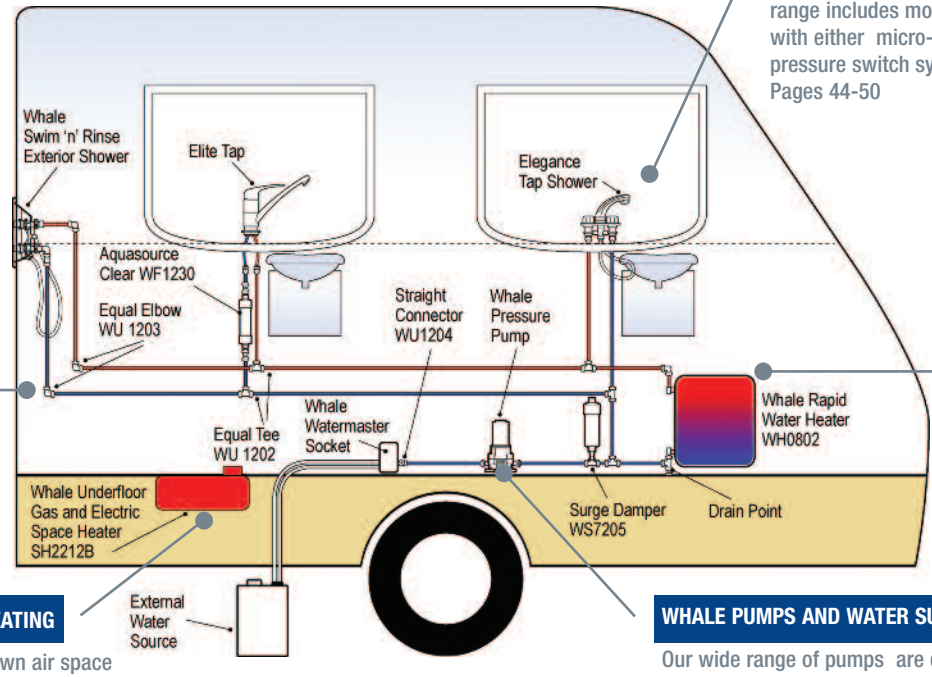
Efficiency

Light Weight

Reliability

Serviceability

Typical Whale Water and Heating Installation



WHALE TAPS AND SHOWERS

Whale modern style taps and showers are lightweight and the range includes models for use with either micro-switch or pressure switch systems.
Pages 44-50

WHALE QUICK CONNECT PLUMBING

Reliable plumbing solutions specifically designed for mobile applications
Pages 39-43

WHALE WATER HEATING

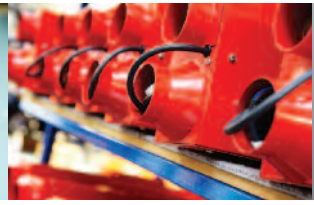
Our range of water heaters include high capacity and fast heat up models operating on gas and or electric
Pages 20-23

WHALE SPACE HEATING

A full range of blown air space heaters designed to maximize living space inside the van
Pages 14-20

WHALE PUMPS AND WATER SUPPLY

Our wide range of pumps are designed to deliver smooth constant supply
Pages 24-38



Quality

Every product, fully tested, every time

At Whale we pride ourselves on applying sophisticated manufacturing technology coupled with the latest design techniques. Whale employees are committed to providing excellent customer service.

Innovation

Award winning designs

Whale's proven pioneering technology has led the way for decades. Innovations in pumps, plumbing systems and advanced electronics have resulted in ground-breaking products such as Whale Underfloor Space Heating, pump and heating technology and a new Intelligent Control range of complete water management systems.

Service

Tried and tested, trusted for decades

Our strong reputation for reliability has been built on decades of experience in UK manufacturing. We support our products with advice and service kits many years after the original fit.

Meet the Whale Team

Sarah Baird
Commercial Manager

Steed Barbour
Customer Support Engineer

Alex Duggan
Customer Support Engineer

Richard Bovill
Engineering Manager

Aiden Devlin
Customer Service Representative

Jacqueline Morrow
Marketing Executive

Stanley McFarland
Engineering Director

Chris Ragg
Project Engineer

David Smyth
Design Engineer

Mark Walmsley
Product Manager

John Matchett
Quality Engineer

Whale Out and About

The MOTORHOME & CARAVAN SHOW
16-21 OCT 2012 · NEC BIRMINGHAM

The Spring CARAVAN & CAMPING SHOW
15-24 FEB 2013 · NEC BIRMINGHAM

The Camping and Caravanning Club
The Friendly Club

THE CARAVAN CLUB

NATIONAL CARAVAN MANUFACTURERS ASSOC

THE CARAVAN INDUSTRY 2012 the 36th year AWARDS

THE SUNDAY TIMES 100 BEST SMALL COMPANIES TO WORK FOR 2010

THE SUNDAY TIMES 100 BEST SMALL COMPANIES TO WORK FOR 2011

THE SUNDAY TIMES 100 BEST SMALL COMPANIES TO WORK FOR 2012

What the industry says...

"The Centre for Competitiveness are delighted that Whale (Munster Simms Engineering Ltd) have joined an elite group of organisations by winning a NI Quality Award. The process provides an independent, in-depth review of all aspects of an organisation's activity...Their splendid achievement provides a ringing endorsement of the benefits of the process and has helped the company to sustain a very high level of performance over time."

George Wilson, Centre For Competitiveness.

"It's great to see a long-established firm not resting on its laurels but even in tough times putting substanial sums into researching and developing new products and bringing them into the marketplace."

David Ritchie, Editor Caravan Industry and Park Operator Publication

WINNER
Caravan Times
Readers' Poll 2011

What the press say...

"In our industry there will be fewer more clever, useful and innovative products this year than the new water heater from Bangor-based manufacturer Whale. The timing couldn't be better: while so many parts for leisure vehicles today are sourced from mainland Europe and subject to wild exchange rate fluctuations, it's great to see a homegrown company offering a real alternative."

Rob Ganley, Editor, NCC The Business

Advertising...

New from Whale

What is Whale IC?

A new innovation in system control

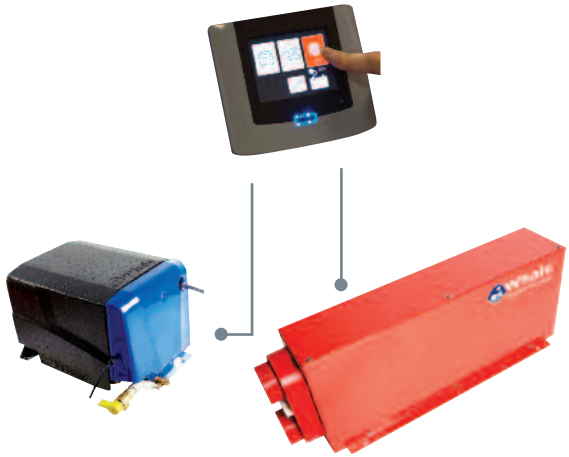
The latest in a long line of innovation from Whale®, Whale's IC products offer advanced technology systems for caravans and motorhomes. Intelligent Control is built into these products to offer you our most advanced trouble free water and heating supply ever!

How does Whale I Van™ work?

This intuitive touchscreen control panel simply guides you through setting your water heating and air temperature and allows you to set automatic timers to create your ideal environment with ease.

Simple - Wireless - Intelligent - Touchscreen - Control - Hub

The result? – The easy way to control your living environment



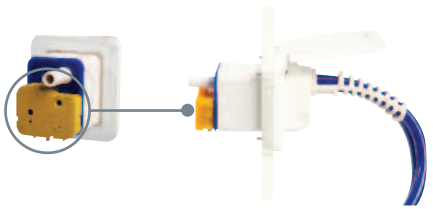
How does Watermaster® IC Pump Controller work?

In a pressure based water system a surge in battery voltage can cause the internal pressure switch in the socket to fluctuate. This leads to pulsations in water flow. Similarly, if the battery voltage drops, the pump may be unable to produce enough pressure to activate the pressure switch and the pump may run on continuously. Also, if the external water container runs out, the pump will continue to run on. This drains the battery and may reduce the life of the pump. Until now the only solution has been to manually adjust the pressure switch.

Watermaster IC eliminates these problems and the need for pressure switch adjustment.

Innovative electronic control circuitry monitors the level of battery voltage and compensates for any surges/reductions in battery voltage that can occur. It also cleverly senses when the water container runs dry and switches the pump off.

The result? – Never adjust your pressure switch again, enjoy a smooth, constant water flow. Never let your pump run dry, protect and prolong your submersible pump



I Van™ - Intelligent Control Panel

The easy way to control your living environment

The latest in a long line of award winning innovations from Whale®, Whale's IC products offer advanced technology systems for caravans and motorhomes.

Simple, Intuitive Touchscreen Display:

I Van™ home screen

Programmable Timer

Space Heating Screen

Water Heating Screen

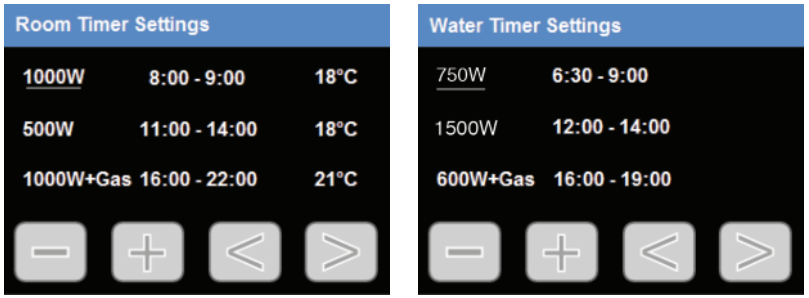
Modern and stylish intelligent control panel for Whale® Water and Space Heaters.

Unique homescreen display:

- Running mode for each unit
- Room and water temperature
- Mains current draw
- Battery voltage
- Frost protection facility

Easy to set programmable timer*

- Up to 3 programmable settings per day, per unit
- Control temperature and power separately



*Example timer settings shown are based on a site with amp usage limited to 10 Amps (approx. 2300W), and allows for other powered equipment to run simultaneously e.g. kettle/toaster etc.

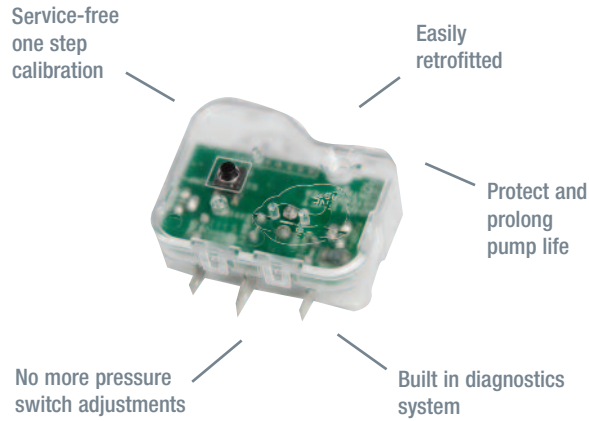
Simple / Wireless / Intelligent / Touchscreen / Control / Hub

Please note: I Van™ is available to vehicle manufacturers only

IC Intelligent Control™

NEW Watermaster® IC Pump Controller

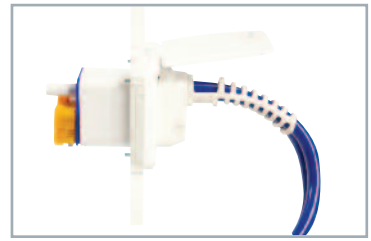
Intelligently controls the submersible pump for trouble-free operation and peace of mind


Service-free one step calibration
Easily retrofitted
Protect and prolong pump life
No more pressure switch adjustments
Built in diagnostics system

One small step for caravanners, two giant leaps in innovation:

- **Never adjust your pressure switch again**
  - Enjoy a smooth, constant water flow
- **Never let your pump run dry**
  - Protect and prolong your submersible pump's life

Watermaster IC Pump Controller unit – fits easily to back of socket



Easily retrofitted to a Whale Watermaster pressure switch socket (ES1001 or ES5001)

Kit Includes:

Watermaster IC unit

Watermaster high flow submersible pump

Protect and prolong your submersible pump

- No more pressure switch adjustments
- Stops pump pulsating at high voltages
- Stops the pump running continuously at low voltages
- Detects when water has run out and turns pump off
- Surge damper no longer required
- Protects and prolongs the submersible pump
- Helps lengthen the battery life
- Built-in fault diagnostics system
- Service free, one-step calibration process
- Easily retro-fitted*

*Note - Whale® Watermaster IC is compatible with a Whale® Watermaster pressure switch socket and a Whale® Watermaster High-Flow Pump Only

For use with

Whale Watermaster sockets with built-in pressure switches as pictured left (ES1001 / ES5001)

Not compatible with

inline pressure switch systems

Watermaster Pump Controller (with Intelligent Control)

Part No:	EP1632
Voltage:	Voltage range 9.5V d.c. to 14.5V d.c. (normal operation) Voltage range 8.5V d.c. to 9.5V d.c.(limited operation)
Nominal Current:	Operating 3.7 Amps, Standby 0.007 Amps
Recommended fuse size:	5 amp Automotive
Weight:	0.65kg
Materials:	Pump body: ABS, Seals: Nitrile®, Strainer: Polypropylene Impeller: PBT, Cable: PVC, Grease Seal/I Nitrile®. Wire: PVC insulated copper, Hose: PVC, Plug: PBT Watermaster IC: Polycarbonate
Accessories:	WF1230 12ml in-line water filter (available separately)
Service Kits:	Watermaster IC Pump Controller is not a serviceable part EP1612 replacement high-flow submersible pump

Performance

Data @ 13.6V Discharge head: 0m (0ft) 1m (3ft) 3m (9ft) Compatible For use with Whale High-Flow pumps: Watermaster (EP1612) ONLY	Flow rate per minute / current draw: 15.8 ltrs / 3.8 amps 14.8 ltrs / 3.7 amps 12.8 ltrs / 3.5 amps
Operating temperature range:	30ºC to 40ºC
Storage temperature range	-30ºC to 60ºC

NEW Space Heater

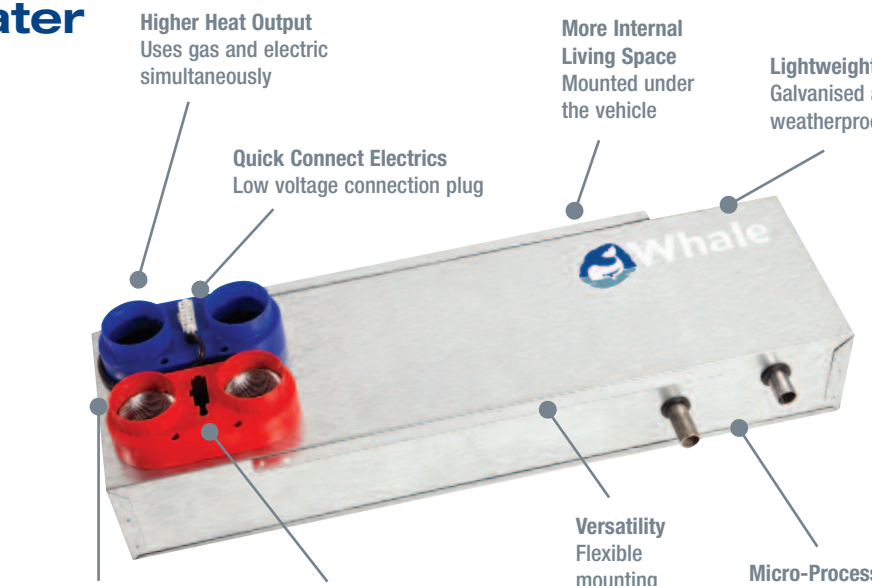
NEW 4kW High Output Underfloor Space Heater

The latest addition to Whale's space heater range

Higher heat output, Maximum performance

New boost setting balances gas and electric inputs to effectively and efficiently adjust the heat output

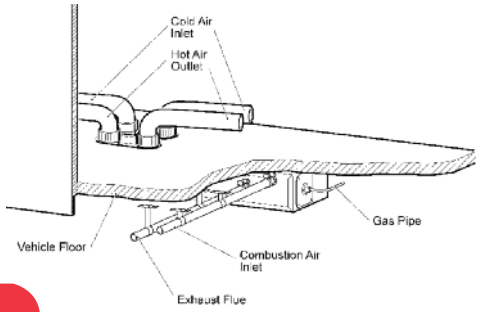
- Maintains a comfortable living environment
- Uses both gas and electric for higher powered heating
- New twin ducting system for more installation options and higher heat output
- Mounted underfloor, more space inside
- Lightweight design
- No chimney or flue covers required
- Intuitive and simple controls



Please note: All Whale Space and Water Heater products must be installed and serviced by a qualified gas engineer in accordance with the appropriate installation instructions. Underfloor models available to vehicle manufacturers only.

Accessories

Typical Installation



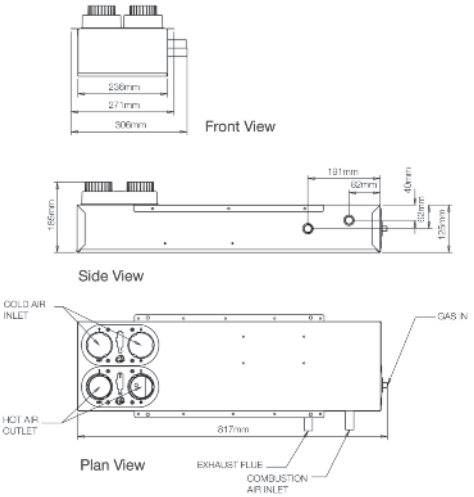
Control Panel

- **Easy to mount**
- **Simple to use with position stops to prevent accidental adjustment**
- **Six Variable Heat Settings:**
  - Low/Quiet Night Time Setting
  - Medium Heat Setting
  - High Heat Setting
  - Boost Setting
  - Circulation fan setting
  - Gas Only Setting

Model Specifications

Model	SH4312B (underfloor gas & electric)	
Gas	Gas Type	Butane & Propane
	Heat Input (Gross)	2.9kW
	Gas Connection	8mm Compression fitting
	Current Consumption (12V)	1.8 Amps (<22W) (0.01 Amps on stand by)
Electricity	Supply	12V d.c. + 230V a.c. 50 Hz
	Heat Input (Gross)	2.0kW
	Max. Current Consumption (230V)	9 Amps (2kW settings)
	Max Current Consumption (12V)	2.2 Amps (2kW settings)
Gas & Electric	Combined	12V d.c d.c. + 230V a.c. 50 Hz

Dimensions

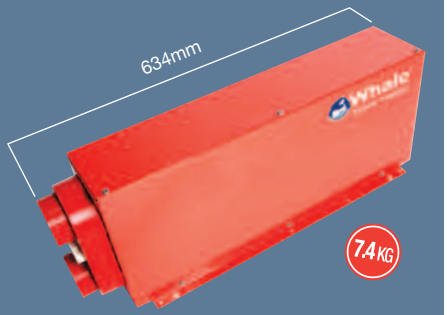


Flue Mounting Flexibility

- Easy to mount
- Flexible ducts for easy installation
- Flue pipes mounted underfloor for safe and discreet space saving
- Available in 0.75m (FK2075), 1.25m (FK2125) and 2m (FK2020) lengths.

Internal Models

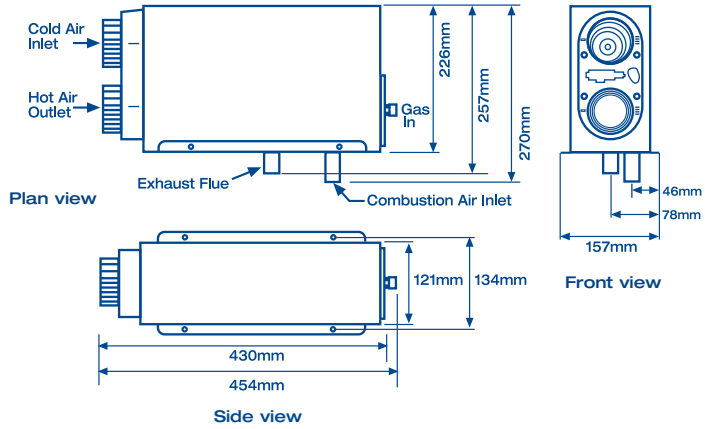
Space Heater
SH2201 Internal Gas Model
3 year Warranty



Space Heater
SH2202 Internal Gas and Electric Model
3 year Warranty

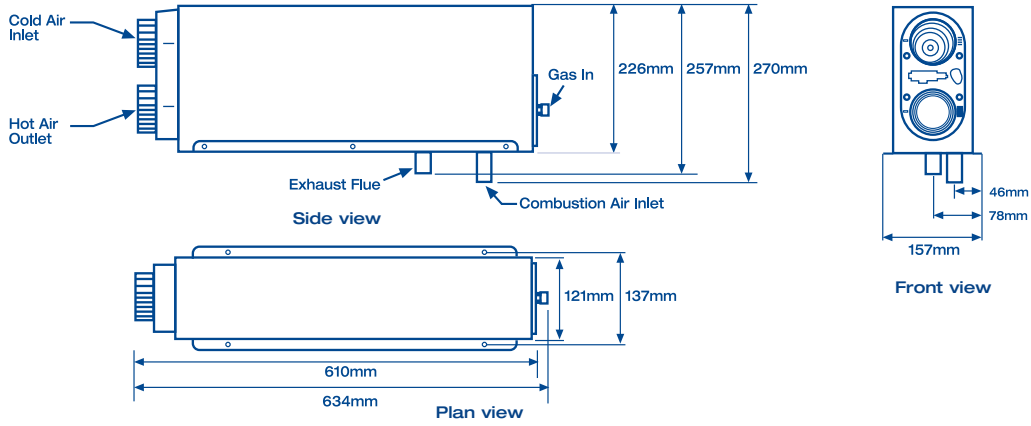
Full Range of Gas and Electric Space Heaters

SH2201 Internal Gas Model



- **Choose from four new models**
- Option of internal or underfloor installation
- Option of gas only, or gas and electric models
- Simple and intuitive to use
- More compact installation
- Better insulation
- Improved service access
- Lightweight unit (from only 5.4kg)
- No internal flue or chimney required
- No wiring, simply plug in

SH2202 Internal Gas and Electric Model

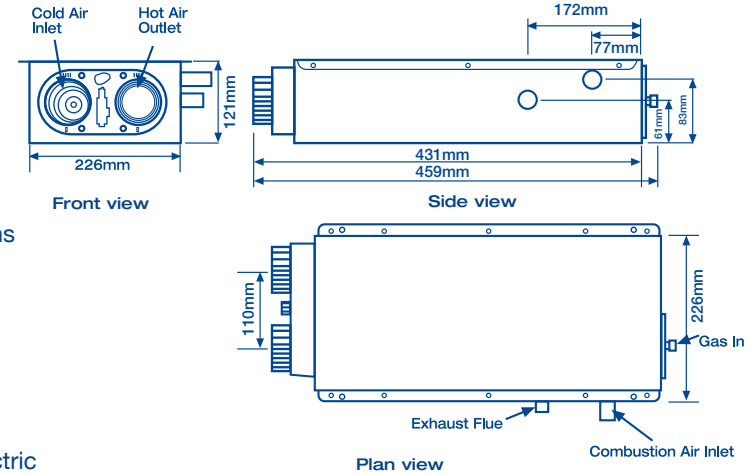


Full Range of Gas and Electric Space Heaters

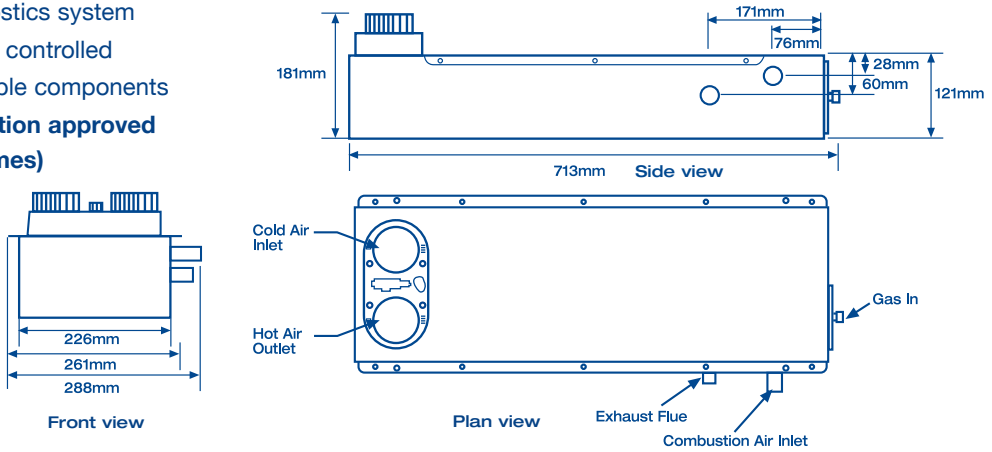
Features and Benefits

- **Frees up valuable storage space**
- Discreet and compact design
- No internal flue or roof mounted chimney required
- **Versatile & lightweight**
- Can be mounted in various locations
- **Rapid heat supply**
- **Simple to use control panel**
- **Energy efficient design**
- Superior insulation
- Low voltage
- Requires only 2kW gas or 2kW electric
- Can run on either Butane or Propane gas
- **Easy fault finding and servicing**
- Built-in diagnostics system
- Micro Process controlled
- Easily accessible components
- **Vehicle in motion approved (for motorhomes)**

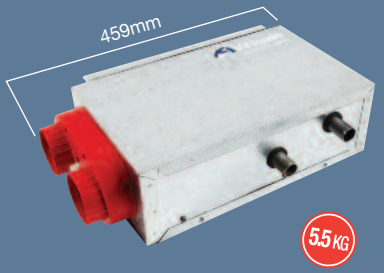
SH2211B Underfloor Gas Only Model



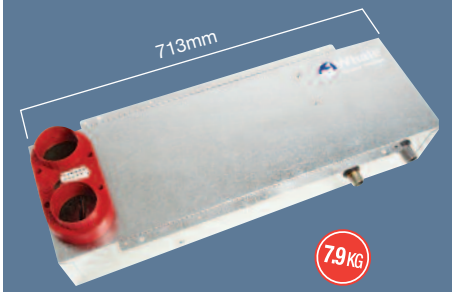
SH2212B Underfloor Gas and Electric Only Model



Underfloor Models



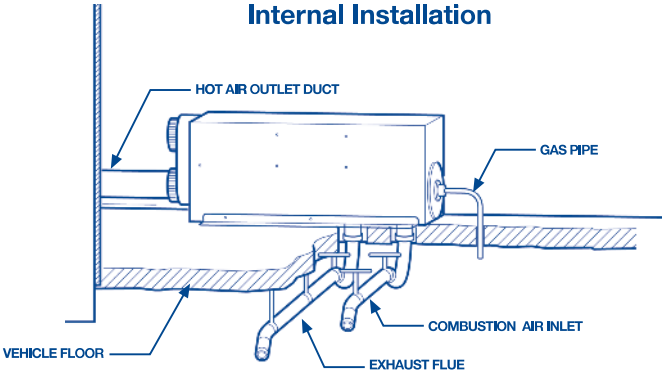
SH2211B Underfloor Gas Only Model
3 year Warranty



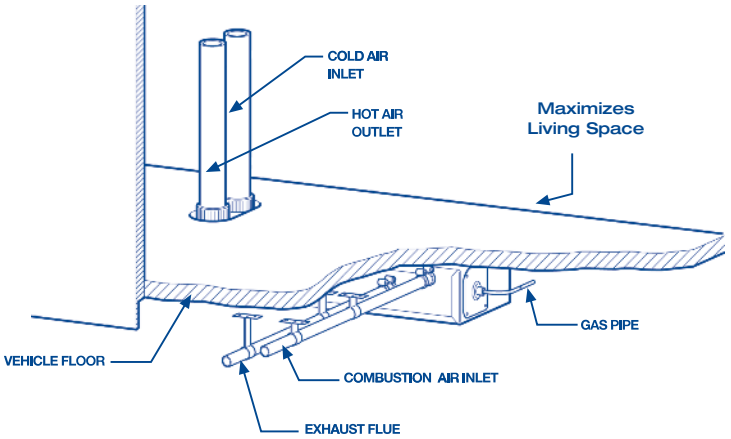
SH2212B Underfloor Gas and Electric Model
3 year Warranty

Installation Options

Internal Installation



Underfloor Installation



Intuitive and simple controls

- Electric settings 500W/1000W/2000W
- Gas setting
- Circulation fan setting

Certified to the following directives

- Low Voltage Directive 2006/95/EC
- Gas Appliance Directive 90/396/EEC
- EMC Directive 2004/108/EC

Model Specifications

Model	**MODEL SH2201 (Internal Gas Only)** **MODEL SH2202 (Internal Gas and Electric)** **MODEL SH2211B (Underfloor Gas Only)** **MODEL SH2212B (Underfloor Gas and Electric)**	
Gas	Gas Type	Butane and Propane (29/37 or 30mbar regulators)
	Heat Input (Gross)	2.0 kW
	Gas Connection	8mm Compression fitting
	Current Consumption, (12V)	1.6 Amps (<20W) (0.01 Amps on stand by)
Electricity	Supply	12V d.c. + 230V a.c. 50 Hz
	Heat Input (gross)	2.0 Kw
	Max. Current Consumption, (230V)	9 Amps (2kW settings)
	Max. Current Consumption, (12V)	2.2 Amps (2kW settings)

Please note: All Whale Space and Water Heater products must be installed and serviced by a qualified gas engineer in accordance with the appropriate installation instructions. Underfloor models available to vehicle manufacturers only.

Contact Whale Support for details of your local Whale Authorised Dealer:

Whale Support **0845 217 2922**

Accessories

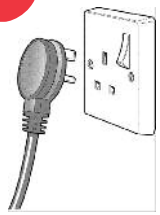
Flue Mounting Flexibility

- Flexible ducts for easy installation
- Flue pipes mounted under floor for safe and discreet, space saving.
- Available in various lengths, 0.75m (FK2075), 1.25m (FK2125), 2m (FK2020)

Minimal Wiring

3 Pin Plug

- Simply plug in - no wiring required



Choice of Vent Colours

- To suit your interior decor (Beige, Black, and Cream)
- Range includes fixed and directional options

Directional Fitting (DX6511)

Fixed Fitting (DX6516)

Directional Fitting (DX6531)

Fixed Fitting (DX6536)

Directional Fitting (DX6521)

Fixed Fitting (DX6526)

Simple to Use Control Panel

- Simple to use with position stops to prevent accidental adjustment
- Three Heat Settings
  - Quiet Night Time Setting (on electric 500W)
  - Heat Boost Setting (on electric 2000W)
  - Frost Protection Setting
- Easy to mount
- One 3.5m cable with modern connectors

Range of Ducting Fittings

- For standard 65mm air ducting for cold air inlet and hot air outlet

End Cap Fitting (DX6501)

Straight Fitting (DX6502)

T Fitting (DX6503)

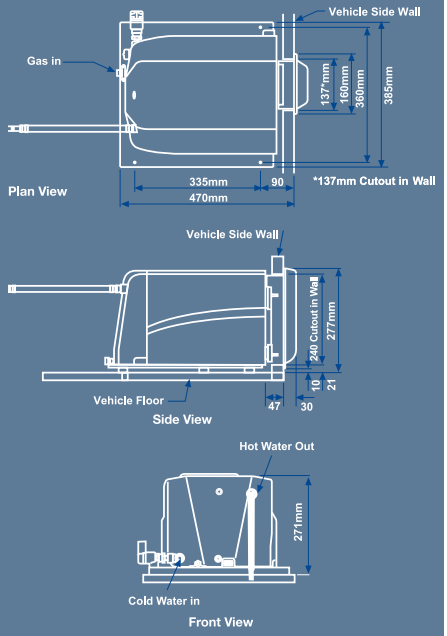
Y Fitting (DX6504)

Spares

Contact Whale Support for list of available spares

0845 217 2922

13L Water Heater
3 year Warranty
Product Meets Grade III Classification of Thermal Installation and Heating (EN1645-1)



Full Range of Gas and Electric Storage Water Heaters 13L High Capacity

- **Compact designs**
  - More internal living space
- **Easy Installation**
- **Choice of settings**
  - Fast heat up or low current draw
- **New flue design**
  - Easily installed, no cover required
- **Pressure relief valve with drain function**
  - Drains entire water system faster
- **Highly durable burner design**
- **Robust polypropylene Insulation**
  - Retains heat for longer
  - Shorter re-heat times
- **3 year warranty**
- **Simple to use ON/OFF control panel**
- **13 ltrs capacity**
- **Weighs only 10kg (dry wieght)**

Model Specifications

Model	WH1302	
Water	Capacity	13 litres
	Pressure relief valve setting	2.6 bar
	Maximum water inlet pressure	1.9 bar
Gas	Gas Type	Butane and Propane CAT I3+ (29/37) CAT I3B/P (30)
	Heat Input (net)	1.25kW
	Gas Consumption	93 g/hr
	Gas Connection	8mm compression fitting
Electricity	Supply	12V d.c. + 230V a.c. 50 Hz
	Electric lowest Eco Setting	750W
	Electric highest setting	1500W
	Max. Current Consumption (12V)	0.36 Amps (0.01 Amp on standby)
	Max. Current Consumption (230V)	2.6 / 5.2 Amp
Approximate heat up times (15 to 70 degrees C)	Gas Operation	43 mins
	Electrical Operation	32 mins
	Gas & Electrical Operation	20 mins
Certified to the following directives	Low Voltage Directive 2006/95/EC Gas Appliance Directive 90/396/EEC EMC Directive 2004/108/EC Directive 74/483/EEC including 2006/96/EE Vehicle Type Approval	

Suitable for: Caravans, Motorhomes and Mobile Applications

Please note: All Whale Space and Water Heater products must be installed and serviced by a qualified gas engineer in accordance with the appropriate installation instructions.Underfloor models available to vehicle manufacturers only.

Full Range of Gas and Electric Storage Water Heaters 8L Rapid Heat

- **Compact designs**
  - More internal living space
- **Easy Installation**
- **Choice of settings**
  - Fast heat up or low current draw
- **New flue design**
  - Easily installed, no cover required
- **Pressure relief valve with drain function**
  - Drains entire water system faster
- **Highly durable burner design**
- **Robust polypropylene Insulation**
  - Retains heat for longer
  - Shorter re-heat times
- **3 year warranty**
- **Simple to use ON/OFF control panel**
- **8 ltrs capacity**
- **Weighs only 8kg (dry wieght)**

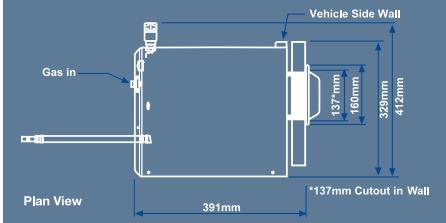
Model Specifications

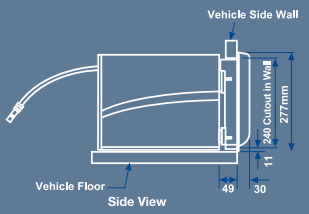
Model	WH0802	
Water	Capacity	8 litres
	Pressure relief valve setting	2.6 bar
	Maximum water inlet pressure	1.9 bar
Gas	Gas Type	Butane and Propane
		CAT I3+ (29/37)
		CAT I3B/P (30)
	Heat Input (net)	1.25kW
	Gas Consumption	93 g/hr
	Gas Connection	8mm OD copper tube
Electricity	Supply	12V d.c. + 230V a.c. 50 Hz
	Electric lowest Eco Setting	750W
	Electric highest setting	1500W
	Max. Current Consumption (12V)	0.36 Amps (0.01 Amp on standby)
	Max. Current Consumption (230V)	6.5 Amps (1.5kW settings)
Approximate heat up times (15 to 70 degrees C)	Gas Operation	26 mins
	Electrical Operation	20 mins
	Gas & Electrical Operation	12 mins
Certified to the following directives	Low Voltage Directive 2006/95/EC	
	Gas Appliance Directive 90/396/EEC	
	EMC Directive 2004/108/EC	
	Directive 74/483/EEC including 2006/96/EE	
	Vehicle Type Approval	

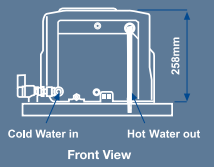
Suitable for: Caravans, Motorhomes and Mobile Applications

Please note: All Whale Space and Water Heater products must be installed and serviced by a qualified gas engineer in accordance with the appropriate installation instructions.Underfloor models available to vehicle manufacturers only.

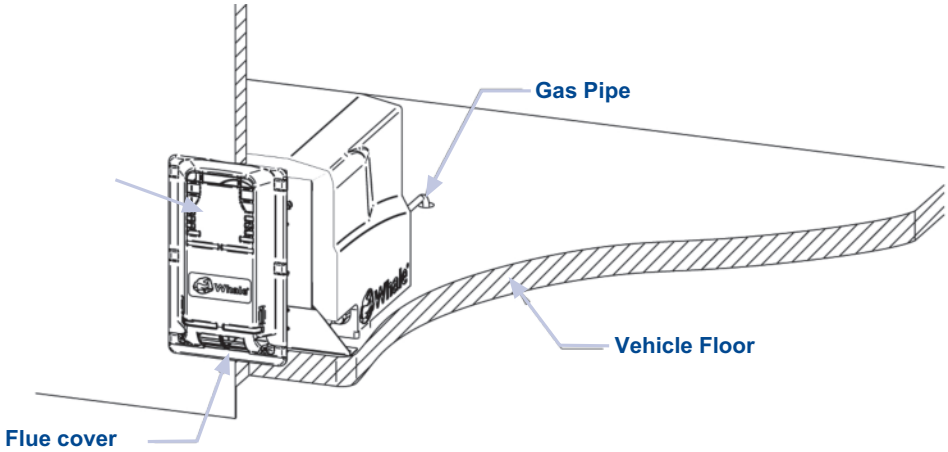
8L Water Heater
3 year Warranty







Installation Typical



One model - 5 running options

- Gas only setting
- Electric low setting (600W/2.6A)
- Electric high setting (1200W/5.2A)
- Gas and electric low setting
- Gas and electric high setting

Contact Whale Support for details of your local Whale Authorised Dealer:

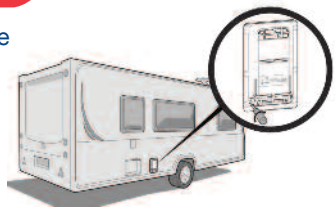
Whale Support **0845 217 2922**

Please note: All Whale Space and Water Heater products must be installed and serviced by a qualified gas engineer in accordance with the appropriate installation instructions.

Accessories

Easily Assembled Flue

- New aesthetically designed flue
  - In line with type approval
- Innovative design
  - No cover required



Minimal Wiring

3 Pin Plug

- Simply plug in - no wiring required

Spares

Contact Whale Support for list of available spares

0845 217 2922

Ideal Retro-fit

Replace your existing water heater
By using our universal adaptor plate (AK1203)

One Control Panel

Includes Easy to Mount and Use Control Panel

- One model 5 settings
- Simple to use Control Panel
- One 3.5m cable with simple connectors

Quick Connect Plumbing

Whale 12mm Quick Connect
Pre-Assembled Plumbing

- Quick connection to hot and cold water pipework
- Adaptors for other pipework systems included
- For details on our full plumbing range, contact Whale Support

Maintenance

- Diagnostics system for easy fault finding
- Easily accessible components

AquaSmart®
2 Year Warranty

AquaSmart® Onboard Fresh Water Pump System

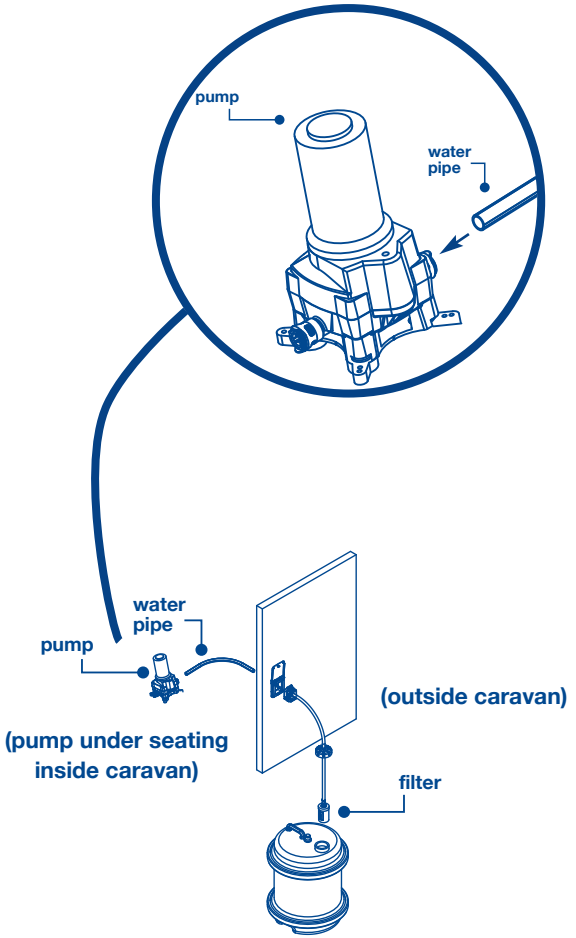
Superior showering through improved, consistent flow rate and temperature

- Superior Showering with AquaSmart®
- Better all-round flow rates in your caravan
- Self-priming pump, pressure switch and carbon filter all on one unit
- Compatible with Whale Watermaster®, Truma Crystal II® and Truma Compact® sockets
- Upgrades existing microswitch / pressure switch systems
- Runs dry without damage
- Easily replaceable carbon filter (removes nasty tastes and impurities)
  WF3000 - see page 56 for details

Model Specifications

Model	AquaSmart®
Product Code	AQ0814
Open Flow Rate per Min	5.5 ltrs
Voltage	12 V d.c.
Cut Out Pressure	2 bar (30 psi)
Recommended Fuse Size	5 amp automotive
Weight	2.5 kg (5.5 lbs)
Inlet/Outlet on Pump Connections	12 mm Quick Connect
Hose Connections	Fittings included for 3/8" and 1/2" flexible pipework
Materials in Contact with Liquid	Glass-filled Polypropylene, Monprene®, Nitrile®, Stainless Steel, PBT, PVC, Carbon, ABS
Service Kits	Microswitch (AK1317) Plug & filter combo (UH0814) Replacement pump head (AK1318) see page 65
Maximum Head	20 metres (66 ft)
Maximum Lift	3 metres (10 ft)

Typical Installation

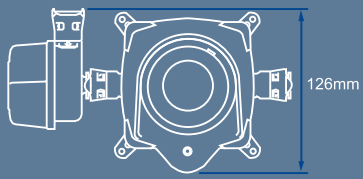


User Tips

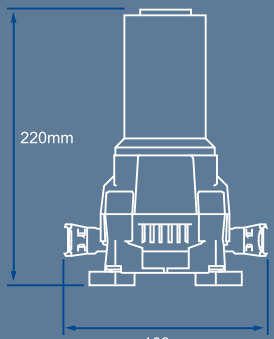
1. *When the system is first used or if air is sucked into the system when emptying or refilling your water container:*
   - *Open one hot tap (e.g.kitchen sink)*
   - *Place carbon filter which is fitted to hose into the water container*
   - *Insert plug into wall socket and close lid to lock plug in place*
   - *Switch on 12V d.c. supply to pump*
   - *When water is flowing smoothly close hot tap and open cold tap to expel remaining air*
2. *Use hose retaining clip in plug to hold hose and carbon filter off the ground when not in use*
3. *If you do not change your carbon filter as recommended this will invalidate the pump warranty*
4. *It is recommended that you change your AquaSmart® water filter every 3000 litres or after approx 30 days use, as debris will build up in the filter and effect the pump's performance*
5. *Allow filter to sink to bottom of water container before use*

For guide on caring for your on-board pump see page 62

Smartflo
2 Year Warranty



Plan View



Side View

Smartflo®

Now vertically mounted - Uses less bunk space

- Runs dry without damage
- Self-priming and has smooth constant flow
- Inlet strainer included

Model Specifications

Model	8 Litre Capacity
Product Code	UV0814
Open Flow Rate per Mln	8 ltrs
Voltage	12V d.c.
Cut Out Pressure	1.8 bar
Recommended Fuse Size	5 amp automotive
Weight	1.9 kg (4.2 lbs)
Inlet/Outlet Size	Whale Quick Connect 12 mm OD Female
Hose Connections	For 1/2" flexible hose use WU1282 (supplied with pump) For 3/8" flexible hose use WU1280 (not supplied with pump)
Semi-rigid Pipework System Connections	For Whale Quick Connect 12mm NO ADAPTOR REQUIRED 12mm semi-rigid pipe WX7112 (not supplied with pump)
Materials in Contact with Liquid	Glass-filled Polypropylene, Monprene®, Nitrile®, Stainless Steel
Service Kits	Microswitch Klt AK1317, Full head service kit AK1318 Strainer replacement AK1320, see page 65
Maximum Wire Size	2.5 mm² (13AWG)
Maximum Head	20 m (66 ft)
Maximum Lift	3 m (10 ft)

Please note: Each pump's performance will depend on the plumbing system and restrictions on outlets in your caravan

User Tips

When the system is first used or if air is sucked into the system when emptying or refilling your water container:

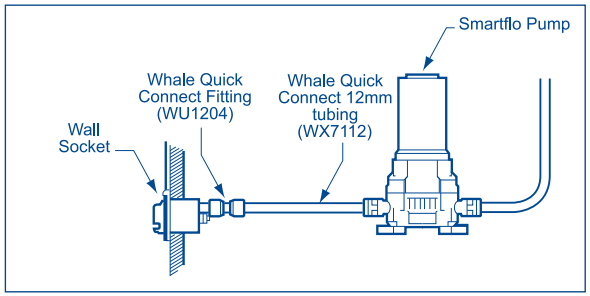
1 *Open one hot tap (e.g.) kitchen sink*
2 *Place hose into the external water container / onboard tank*
3 *Insert plug into wall socket and close lid to lock plug in place*
4 *Switch on 12V d.c. supply to pump*
5 *When water is flowing smoothly close hot tap and open cold tap to expel remaining air*

Please note: Following these instructions will maximize the performance of your pump.

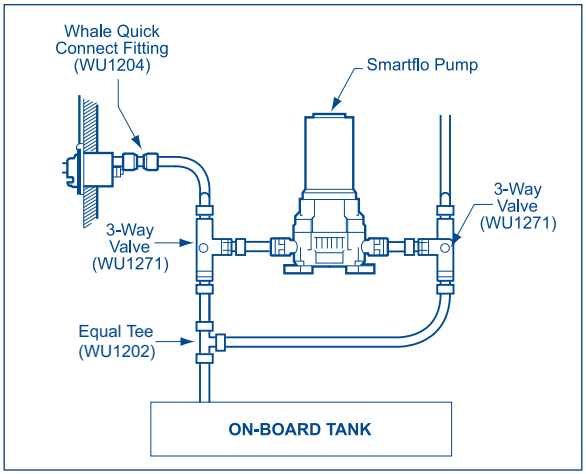
Smartflo® Pump - Typical uses:

- Providing water from tank to taps
- Filling the on-board tank from the outside

Typical Installation Standard System



Typical Installation Manual System for use with on-board water tanks



For guide on caring for your Smartflo pump see page 62

Important

- *ONLY 8 ltr pressurised pumps are suitable for caravan or motorhome installation*
- *The inlet strainer included with this product is ONLY suitable for caravan and motorhome installations that ONLY PUMP FROM AN ON BOARD WATER TANK. It is not suitable for mains water connections.*

Underfloor 40L
Fresh Water Tank
1 Year Warranty

Underfloor 40L Fresh Water Tank

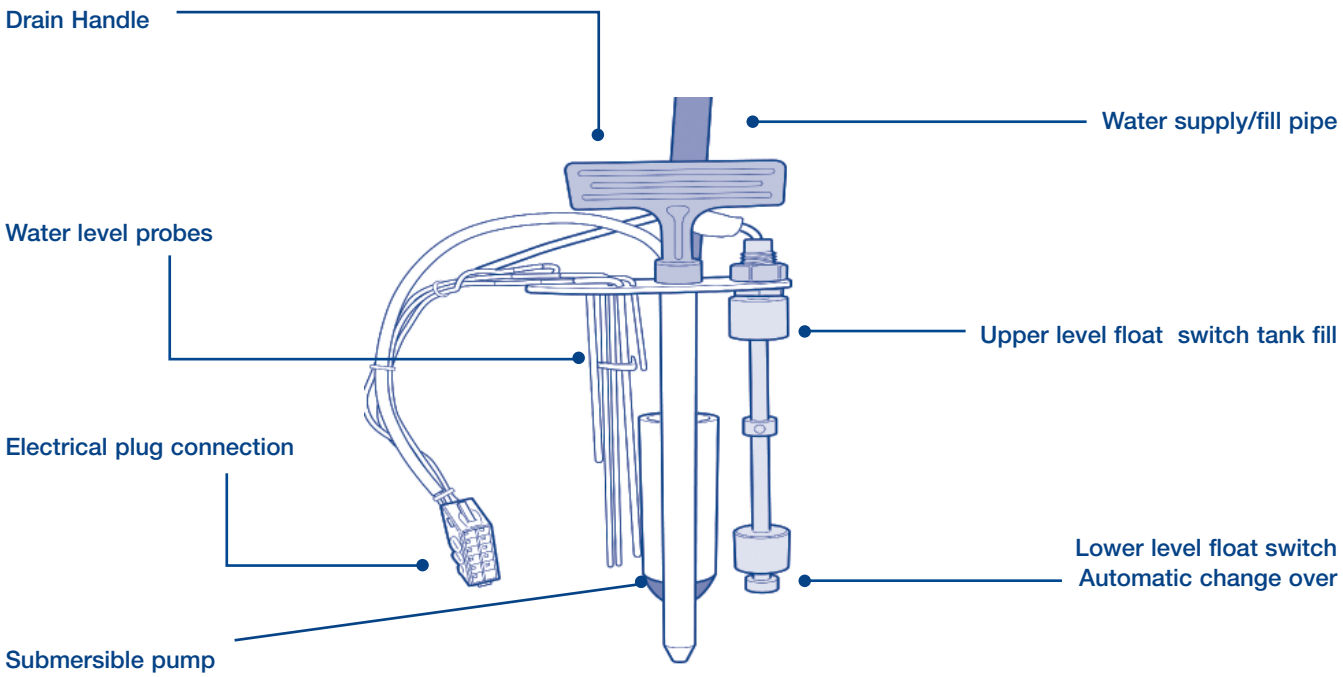
Maximises capacity while saving space with underfloor fitting

- Tri wall construction
  - Helps delay freezing
- Electronic control module.
  - Monitors water level.
- Easy fill with float switch cut off
  - No water wasted when filling from outside Aquaroll
- Automatic float switch change over system
  - Switches to outside Aquaroll automatically
- Whale easy drain – hands off operation
  - Simply drained by lifting & rotating handle inside the vehicle

Model Specifications

Model	40L water tank	
Product Code	WT4100B	
Construction	Tri-wall	Polyethylene / Foam Polyethylene / Polyethylene
Capacity	38.5 ltrs	
Dry Weight	5.30kg	
Tank Chassis Support Bracket	3mm galvanized steel	
Control Module	Float Switch Body Easy Drain Handle Easy Drain Stem Level Sensor Housing	Polypropylene ABS Acetal Stainless steel
High Flow Submersible Pump	Optional Extra	(If internal pump not already fitted.)
Voltage:	10Vdc to 14.2Vdc	
Nominal current Draw:	3.5 amps	
Max Operating Pressure:	1.2 bar	
Fuse:	5 amps	
Pump body:	ABS	

Electronic Control Module



Please note: This product is available to vehicle manufacturer fit only, not available as a retail product

Watermaster® Freshwater Connection Range

The Name Says It All!

- Simplifies the connection between an outside water container into the caravan
- Top performance pump
- Kink-resistant, wipe clean hose for easy storage
- Suitable for microswitch or pressurised systems
- Anti airlock design

Watermaster® EP1322/EP1622
Compatible with Truma® Sockets
1 Year Warranty

Watermaster® EP1312/EP1612
Compatible with Whale® Socket
1 Year Warranty

Product Codes	Watermaster® Range Descriptions
EP1322	Watermaster® with 12 V d.c. Premium pump and plug compatible with Truma Crystal II® & Compact® socket (light blue hose)
EP1622	Watermaster® with 12 V d.c. High Flow pump and plug compatible with Truma Crystal II® & Compact® socket (light blue hose)
EP1312	Watermaster® with 12 V d.c. Premium pump and plug for Whale® Socket (dark blue hose)
EP1612	Watermaster® with 12 V d.c. High Flow pump and plug for Whale® Socket (dark blue hose)

Model Specifications

	Watermaster
Weight	0.5 kg (1.06 lbs)
Fuse	5 amp Automotive
Materials	Pump Body: ABS, Seals: Nitrile®, Strainer: Polpropylene Impeller: Stainless Steel / PBT, Cable: PVC, Grease Seal: Nitrile® Wire: PVC insulated copper, Hose: PVC, Plug: PBT

EP1322 and EP1622 Models Feature Whale Easyplug - Simply squeeze and pull to disconnect

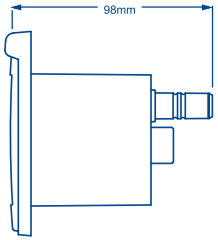
User Tips

EP1322 and EP1312 *Watermaster® with Premium Pump recommended for multi outlet applications*
EP1622 and EP1612 *Watermaster® with High Flow Pump with higher flow rate for showering*

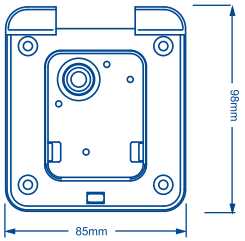
Performance Data	Flow Rate Per Minute / Current Draw	
Model	**Premium**	**High Flow**
Product Code	**EP1312 & EP1322**	**EP1612 & EP1622**
Discharge Head		
0m (0 ft)	13.2 ltrs 3.6 amps	15.8 ltrs 3.8 amps
1m (3 ft)	11.75 ltrs 3.3 amps	14.8 ltrs 3.7 amps
3m (9 ft)	9.25 ltrs 2.9 amps	12.8 ltrs 3.5 amps

Please note: Pump performance may vary depending on the plumbing system and restrictions on outlets in your caravan

Watermaster Socket



Side View



Front View

NEW

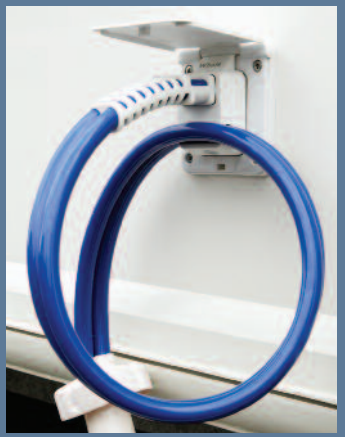
Please note: see page 12 for New Watermaster IC Pump Controller for use with EP1612 pump

Product Codes	Watermaster Range Descriptions
ES1000	Whale® socket compatible with microswitch taps and AquaSmart® system for Submersible pump systems (ivory)
ES1001	Whale® socket with built in pressure switch (ivory)
	Watermaster® Socket Microswitch Service Kit AS5005 (see page 65) Watermaster® Service Kit AK8834 (see page 65)
ES5000	Whale® socket with Microswitch (white)
ES5001	Whale® socket with built in pressure switch (White)

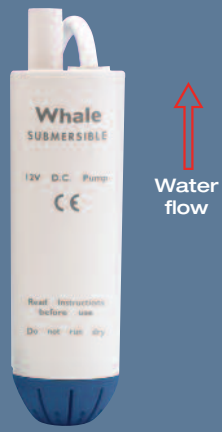
User Tips

- *To lubricate "O" ring and make connection of plug to socket easier, use a water-based lubricant such as silicone grease. Please note: Do not use vaseline to lubricate "O"ring*
- *The plug on EP1312/EP1612 incorporates a clip to hold hose and pump from the ground while not in use*
- *The plug on EP1322/EP1622 incorporates an easy release mechanism to disengage plug from retaining wings - simply push in sides for easy release*

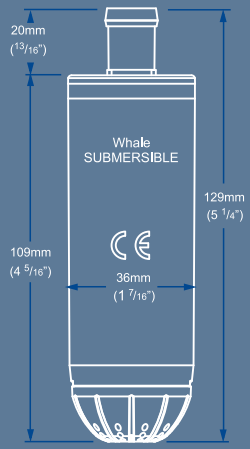
Watermaster® Socket
1 Year Warranty



Hose Holder
Keeps hose clean when refilling Aquaroll



High Flow/Premium Submersible Pump
1 Year Warranty



Front View

Submersible Freshwater Pump Range

Higher Flow Rates and Greater Life

Compact, quiet, lightweight design suitable for use with pressure switch and microswitch systems. Ideal for use pumping from external water containers.

Standard Pump 10 ltrs/min - GP1002

- Simple, compact and an economical solution
- Ideal for basic, one outlet applications

Premium Pump 13 ltrs/min - GP1352

- Reliable, general purpose and suitable for multiple outlets
- Long life, very quiet with low power consumption
- An inexpensive way to update a manual to an electric system

HighFlow Pump 16 ltrs/min - GP1652

- Market leading submersible pump for flow performance suitable for showering

Model Specifications

Model	Standard	Premium		High Flow
Voltage	12V d.c.	12V d.c.	24V d.c.	12V d.c.
Pump	Sub	Sub	Sub	Sub
Submersible Pump Old Model	GP8015	GP8815	GP8825	GP1652
Submersible Pump New Model	**GP1002**	**GP1352**	**GP1354**	**GP1652**
Fuse Size	5 amp automotive		5 amp automotive	3 amp automotive
Weight	0.15kg (0.3 lbs)			
Connection to Flexible Hose	10 mm bore hose	Suits 10 mm or 13 mm Bore Hose		
Connection to 12 mm Quick Connect Plumbing	WU1211 (Stem Adaptor 11mm - 12 mm) see page 40			
Materials in Contact with Liquid	Pump Body: ABS, Seals: Nitrile®, Strainer: Polypropylene, Impeller: Stainless Steel			

Please note: New model codes are direct replacements for old model codes

Please note: Pump performance may vary depending on the plumbing system and restrictions on outlets in your caravan/motorhome.

Performance Data

Flow Rate Per Minute / Current Draw

Model	Standard 12V d.c.	12V d.c. Premium	24V d.c.	High Flow 12V d.c.
Discharge Head	GP1002	GP1352	GP1354	GP1652
0 m (0ft)	10.3 ltrs 2.4 amps	13.2 ltrs 3.6 amps	13.2 ltrs 1.8 amps	15.8 ltrs 3.8 amps
1 m (3ft)	8.75 ltrs 2.2 amps	11.75 ltrs 3.3 amps	11.75 ltrs 1.6 amps	14.8 ltrs 3.7 amps
3 m (9ft)	5.75 ltrs 2.0 amps	9.75 ltrs 2.9 amps	9.75 ltrs 1.45 amps	12.8 ltrs 3.5 amps

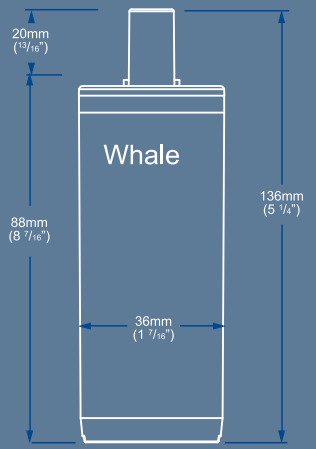
Please note: Pump performance may vary depending on the plumbing system and restrictions on outlets in your caravan/motorhome.

User Tips

For best performance:

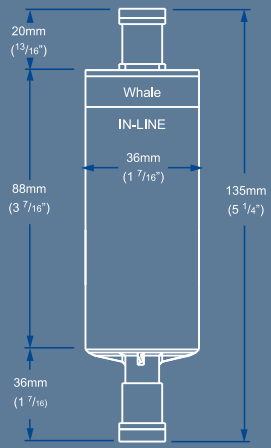
- *Maximum continuous operation should not exceed 15 minutes*
- *Do not run pump dry as it will cause pump damage*
- *Do not use to pump water that is over 60°c*
- *We recommend the pump stands vertically in the tank*
- *Before switching on, place the pump in water and shake for a few seconds to release trapped air. This will ensure successful priming and should be repeated after refilling the water tank*
- *Add an in-line pump into a system to boost water flow (see page 34)*

Standard Submersible Pump
1 Year Warranty



Water flow

In-Line Booster Pump
1 Year Warranty



Front View

In-Line Booster Pump

Boosts Flow in Manual or Electric Pump

- Simple, compact and low-cost pump
- Low power consumption and very quiet
- Ideal for two or three outlets
- Fits unsupported into pipework neatly
- Operates with a microswitched tap, pressure switch or with a separate switch
- Designed for use inline above a submersible electric pump (see pages 32 & 33) and a manual foot pump (see page 52 & 53)

Model Specifications

Model Product Code	In-Line Premium GP1392	In-Line Premium GP1394	In-Line High Flow GP1692
Voltage	12 V d.c.	24 V d.c.	12 V d.c.
Recommended Fuse Size	5 amp automotive	3 amp automotive	5 amp automotive
Weight			0.15 kg (0.3 lbs)
Connections to Flexible Hose	Suitable for 10 mm (⅜") or 13 mm (½") Bore Hose		
Connection to 12 mm Quick Connect Plumbing	WU1211 (Stem Adaptor 11mm - 12 mm) see page 40		
Materials in Contact with with Liquid			Pump Body: ABS, Seal: Nitrile®, Impeller: Stainless Steel

Performance Data

Discharge Head	Flow Rate Per Minute Current Draw		
0 m (0 ft)	13.2 ltrs 3.6 amps	13.2 ltrs 1.8 amps	15.75 ltrs 3.8 amps
1 m (3 ft)	11.75 ltrs 3.3 amps	11.75 ltrs 1.6 amps	14.75 ltrs 3.7 amps
3 m (9 ft)	9.75 ltrs 2.9 amps	9.75 ltrs 1.45 amps	12.75 ltrs 3.5 amps

Please note: Pump performance may vary depending on the plumbing system and restrictions on outlets in your caravan/motorhome.

User Tips

- *For best performance install the pump in the suction pipe between the foot pump and the water tank, not between the foot pump and tap.*

Aquasource - Mains Water Hook-up

The Easy Way to Connect to Mains Water

- No need to carry heavy water containers
- Allows a reliable continuous supply of water
- Delivers water without using battery power
- Suitable for use with caravans and motorhomes with either microswitch or pressure switch systems
- Regulates mains water pressure to nominal 1.5 bar (max. 1.8 bar)
- Ideal for use in UK and European Parks with mains water hook-up facilities
- Lay flat hose for easy storage

Kit includes

- 7.5m lay flat hose
- Whale Plug
- Tap to hose connector
- Plug Adaptor compatible with Truma Crystal II® and Compact® Sockets

Plug adaptor included

Aquasource Mains Water Hook-up
1 Year Warranty

User Tips

- *Ensure your mains tap is turned off when not in use or when van is unattended*
- *Ensure Aquasource Mains Hook Up is kept in a clean dry storage area away from direct sunlight when not in use*
- *Can be used as a hose pipe by fitting the plug adaptor to the plug which will allow water to flow*

Important

Please note: To use the Aquasource Mains Water Hook Up with an onboard Smartflo® pump, the inlet strainer (if included with the pump) must be removed.

Model Specifications

Product Code	EM 9401
Weight	0.9 kg (1.91 lbs)
Hose Connections	¾'' bsp threaded
Hose Length	7.5m
Max. Mains Water Supply Pressure	8 bar (116 psi)
Accessories	7.5 m hose extension (EM9403)

Portable Pump Kit
1 Year Warranty

Self-Venting Portable Pump Kit

The Versatile Portable Pumping Solution!

The Versatile Portable Pump Kit now includes battery clips and a cigar lighter plug to make electrical connection even easier

- Great performance and low voltage pump
- Easy to maintain with a wipe clean hose and nozzle
- Suitable for cold and warm water, diesel, light oils and water-based fluids including most water-based pesticides

The kit now includes

- Low voltage high flow submersible pump
- Nozzle with adjustable on / off, fine spray or a jet of water
- 3.75m (12.5 ft) food quality clear hose
- 3.75m (12.5 ft) cable with battery clips and cigar lighter connector

Can be used in a variety of applications

- Wash down for car, caravan, motorhome or boat
- Suitable for pumping diesel
- Showering, spraying and garden watering
- Storm water clearance
- Filling on board water tank

User Tips

- *Before switching on, place the pump in water and shake for a few seconds to release trapped air. This will ensure successful priming.*

Typical Applications

Pumping Diesel

Wash down

Spraying

Filling on Board Tank

Model Specifications

Model	**Self-Venting Portable Submersible Pump Kit**
Product Code	**GP1642**
Voltage	12V d.c.
Fuse Size	5 amp Automotive
Power Connection	Crocodile Clips and Cigar Light Plug
Weight	0.70 kg
Materials	Stainless Steel, Nitrile®, PVC, Polypropylene, ABS

Performance Data

Discharge Head	Flow Rate and Current Draw
0m (0ft)	15.8 ltrs/min (3.8 amps)
3m (9ft)	12.8 ltrs/min (3.5 amps)

Warning: Please note the Whale Portable Pump Kit is **not** suitable for petrol, low flash point liquids or aggressive chemicals. This pump must **not** be used for pumping petrol or any highly inflammable or corrosive liquids.

Superfil
1 Year Warranty

Superfil Pump Kit

The Easy and Convenient way to fill Caravan / Motorhome In-board Water / Toilet Tanks from an External Water Supply

- Easy to use
- Compact for storage
- Reliable 13 ltrs/min flow rate submersible pump

Kit includes

- 12 V d.c. premium submersible pump
- 1.5m black hose and 1.38m cable
- Two pin plug and 12 V d.c. socket for installation
- Full step by step installation instructions

Model Specifications

Model	Superfil
Product Code	**GP1332**
Voltage	12 V d.c.
Pump	Submersible
Fuse size	5 Amp Automotive
Weight	0.15 kg (0.3 lbs)
Materials in Contact with Liquid	Pump Body: ABS, Seals: Nitrile® Impeller: Stainless Steel, Hose:PVC and Polyprolene
Service Kit	Socket / Gasket (AS8092) See page 65

Quick Connect Plumbing System

Whale Quick Connect fittings ensure a high integrity, reliable, plumbing system solution, specifically designed for use in mobile applications.

Save Time and Money by Using Whale Quick Connect

Fittings and pipework design ensures easy installation and re-usability of components.
The simple two step installation procedure does not require special tools to make a watertight connection.

Features and Benefits

- Unique 'Double Gripper' design provides secure lifelong pipework retention even at high pressures
- The innovative 'cage collet' eliminates leaks where fittings are installed close to tight bends
- Collet has internal support ring ensuring o ring seal is held in position and does not distort or leak under pressure
- High integrity single piece moulding ensures the strength of the fittings
- Outer sleeve incorporates collet cover, thus preventing accidental pipework release
- Collet clips are not necessary and therefore reduce installation time
- Pipework includes measured cut marks, designed to be a visual guide to ensure that fittings are pushed fully home

Equal Tee
WU1202

Equal Elbow
WU1203

Equal Straight
WU1204

End Plug
WU1208

Adaptor 11 – 12mm
WU1211

Tap Tail Adaptor ³/₈" BSP Male
WU1213

Adaptor ¹/₂" BSP Male
WU1214

Tank Fitting
WU1212

Stem Reducer 15–12mm
WU1215

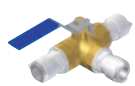
Stem Elbow
WU1222

Adaptor ¹/₂" BSP Female
WU1232

Stem Adaptor ¹/₂" BSP-12mm Male
WU1264

Mounting Clip
WU1265

Shut Off Valve
WU1270



3 Way Valve
WU1271

Stem Tee
WU1205

Non-return valve
FV1300B

Stem Shut off valve
WU1272

Stem Adaptor ³/₈" Hose (For Elite Taps)
WU1280

Stem Adaptor ¹/₂" Hose 12mm (For Elite Taps)
WU1282

Adaptor 15-12mm
WU1512

Pipework 12mm Blue
30m WX7112
(For cold water)

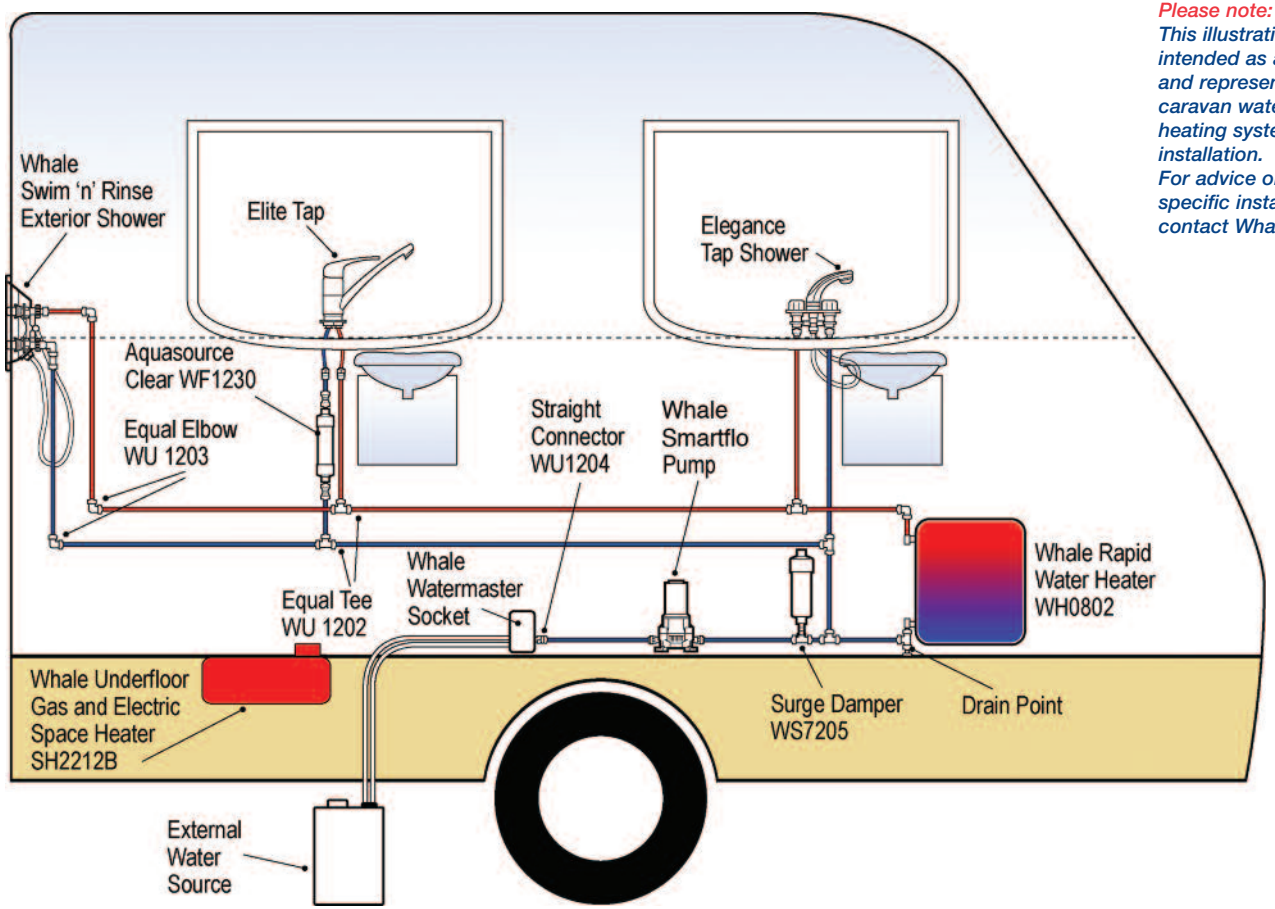
Pipework 12mm Red
30m WX7114
(For hot water)

Pipework 15mm Blue
30m WX7152
(For cold water)

Pipework 15mm Red
30m WX7154
(For hot water)

WX7950
Pipework Cutters - must be used to cut Whale Semi-Rigid Pipework

Typical Whale Plumbing Installation



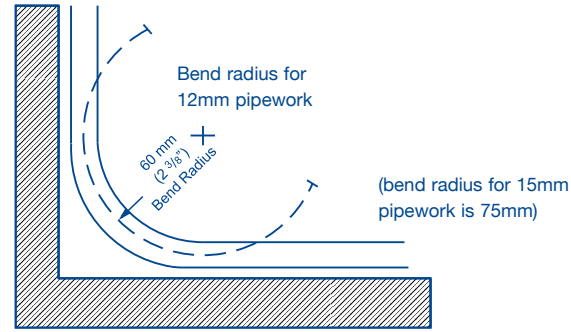
Please note:
This illustration is intended as a guide only and represents a typical caravan water and heating system installation.
For advice on your specific installation contact Whale support.

Whale Quick Connect Semi-Rigid Pipework

Whale Quick Connect colour coded semi-rigid pipework is available in 12 mm, Medium Density Polyethylene (MDPE). 15mm is also available in high performance (Whalex) material. The pipework's flexibility enables tight bends to be formed, hence reducing both the number of fittings and time required at installation. Whale Quick Connect semi-rigid pipework offers the integrity of metal, but the usability of plastic, and is fully tested and recommended for use with the complete range of Whale fittings.

Minimum Bend Radii Recommendations

All grades of Whale Quick Connect semi-rigid pipework are flexible and can be bent into a tight radius to facilitate easy installations. This reduces the number of fittings required and the cost of the total water system.



Installation Guide

Step 1 Cut pipework to length by making a straight clean cut using Whale cutters WX7950 (see **fig.1**)

Step 2 Simply push the pipework length into the fitting to the second internal stop (see **fig. 2**)

Step 3 To release pipework: Push back the grey collet into the fitting, then hold the collet in and pull out the pipework length (see **fig. 3 and 4**)

Fig 1

Fig 2

Fig 3

Fig 4

Please note: ***Do not lubricate the end of the tubing with silicone***

Temperature Settings

WARNING: To prevent scalding, (regardless of the water heating method or the control devices used), the temperature for the hot water supplied to the taps and showers should be controlled in the range of 43 ºC to 60 ºC (110 º F to 140 º F) with a fail safe set at 82 ºC (180 ºF).

CAUTION: Ideally, the temperature should be set at 46 ºC (115 ºF) for health and safety reasons, higher settings will increase the risk of scald injury. Those at greatest risk of scald injury include children, the elderly, disabled, and diabetics.

Minimum Storage Temperature

The minimum dry storage temperature is -40 ºC (-40 ºF)

Please note: It is vital that the system is fully winterized to prevent frost damage.

Materials	
Whale Quick Connect Fittings	Glass-filled Polypropylene
Whale Quick Connect Pipework	Medium Density Polyethylene

Recommended Maximum Operating Conditions	Maximum Pressure	Maximum Temperature
Hot Water	6 bar (87 psi)	65ºC (150 ºF)
Cold Water	12 bar (174 psi)	20ºC (68 ºF)

	Minimum Bend Radius
Quick Connect 12 mm Pipework	5 x O.D. of Pipework

User Tips

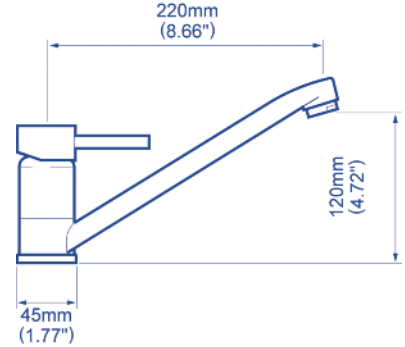
For guide to drain the filter for winterization see page XXXXX

Modern Styled Chrome Taps

Single Lever Kitchen Chrome Tap

TT1111
Single Lever Kitchen Chrome Tap
2 Year Warranty

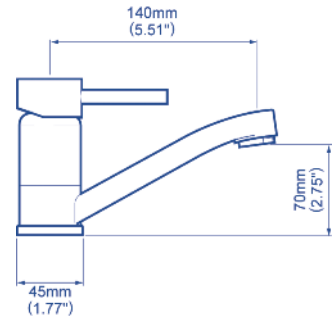
- Easy to operate single lever action allows precise flow and temperature control
- Simple to install with a single round hole mounting
- Supplied with ½" taptails
- Securing Kit includes: Rubber C washer, metal C clamp, threaded bar with nut and sealing O ring`
- For use in pressurised systems only
- Quality chromed brass with ceramic valves



Single Lever Vanity Chrome Tap

TT1311
Single Lever Vanity Chrome Tap
2 Year Warranty

- Easy to operate single lever action allows precise flow and temperature control
- Simple to install with a single round hole mounting
- Supplied with ½" taptails
- Securing Kit includes: Rubber C washer, metal C clamp, threaded bar with nut and sealing O ring`
- For use in pressurised systems only
- Quality chromed brass with ceramic valves

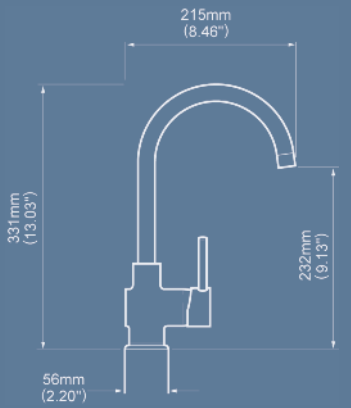


Please note: These taps are intended for use in freshwater systems in recreational vessels / vehicles only and are designed for pressure systems only

Single Lever Swan Neck Kitchen Chrome Tap

- Easy to operate single lever action allows precise flow and temperature control
- Simple to install with a single round hole mounting
- Supplied with ½" taptails
- Securing Kit includes: Rubber C washer, metal C clamp, threaded bar with nut and sealing O ring`
- For use in pressurised systems only
- Quality chromed brass with ceramic valves

TT1211
Swan Neck Kitchen Chrome Tap
2 Year Warranty



User Tips

For guide to drain the filter for winterization see page 64

Ideal for

For all TT Metal tap models
Use in pressurised systems only

Please note: These taps are intended for use in freshwater systems in recreational vessels / vehicles only.

Elite Tap Range

Attractive, lightweight modern domestic style with superb flow

MT0111 / MT1111
Elite Tap (Chrome)
1 Year Warranty

- Easy to operate single lever action allows precise flow and temperature control
- Simple to install with a single round hole mounting
- Light weight and easily plumbed
- 12 mm Quick Connect plumbing connections built-in
- Ideal for installation where space is limited
- Adaptor plates available
- Retrofits to Whale Elegance taps by using mounting plate. (See below)

Model Specifications

Model	Long Spout	Short Spout
Finish	Chrome	Chrome
Colour of Trim	Chrome	Chrome
Product Code (With Microswitch)	MT0111	MT0113
Product Code (Without Microswitch)	MT1111	MT1113
Diameter of Mounting Hole		48 mm (1 7/8")
Materials in Contact with Liquid	Tap Body: Noryl, Spout: ABS	Tap Body: Noryl Spout: Brass
Connection to Quick Connect 15 mm Plumbing	WU1215 or WU1512 - Adaptor 15 mm to 12 mm	
Connection to 10 mm (3/8") Flexible Hose	WU1280 - Stem Adaptor 3/8" Hose	
Connection to 13 mm (1/2") Flexible Hose	WU1282 - Stem Adaptor 1/2" Hose	
Service Kit	See page 65	

Elite Retrofit Mounting Plates

Model	MT0112
Colour	Chrome

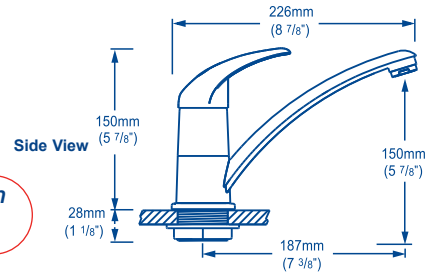
Ideal for

Use in Pressure Switch and microswitch systems (with easily replaceable Microswitch)

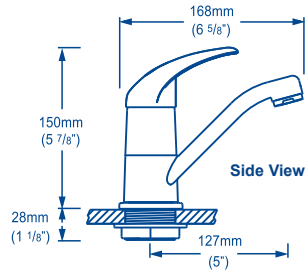
User Tips

For guide on winterization see page 64

Elite Long Spout Model



Elite Short Spout Model



Please note: These taps are intended for use in freshwater systems in recreational vessels / vehicles only.

Elite Shower Range

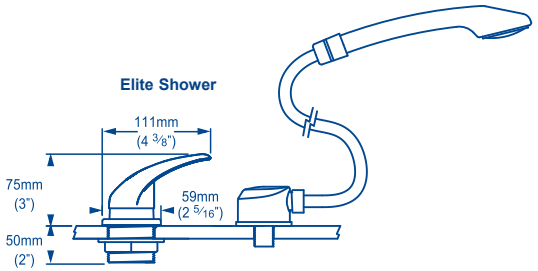
Single Lever Showers

- Easy to operate single lever action allows precise flow and temperature control
- Simple to install with a single round hole mounting
- Light weight and easily plumbed
- 12 mm Quick Connect plumbing connections built-in
- For use in pressure switch and microswitch systems (with replaceable microswitch)
- Ideal for installation where space is limited
- Retrofits to Whale Elegance taps by using mounting plate. (See page 48)

MT0140B / MT0144B
Elite Shower
1 Year Warranty

Model Specifications

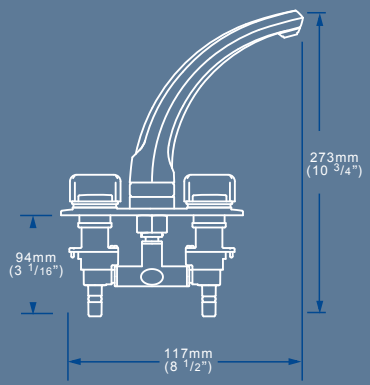
Model	Shower
Colour	Chrome and Diamond White
Product Code (With Microswitch)	MT0140B
Product Code (Without Microswitch)	MT0144B
Connect to Quick Connect 15 mm Plumbing	WU1215 or WU1512 - Adaptor 15 mm-12 mm
Connect to 10 mm (⅜") Flexible Hose	WU1280 - Stem Adaptor ⅜" Hose
Connect to 13 mm (½") Flexible Hose	WU1282 - Stem Adaptor ½" Hose
Hose Length	1.25 m (4 ⅛ ft)
Service Kit	See page 65



Please note: These taps are intended for use in freshwater systems in recreational vessels / vehicles only.

RT2007
Elegance - Mixer Long Outlet
1 Year Warranty

Mixer Faucet Long Outlet



Front View

Elegance Tap Range

Ideal for use with Pressure Switch or Microswitch Systems

- Easy installation
- Ideal where installation space is limited
- Connects directly to Whale Quick Connect 12 mm plumbing
- Full range of mixer and cold only taps
- For systems operating at up to 2.4 bar (35 psi)
- Lightweight
- Mixer tap standard outlet comes with combined tap and shower outlet (see page 49)

Model Specifications

Model	RT1010	RT1210	RT2010	RT2210	RT2007
Description	Single Tap Cold Only		Mixer Tap Standard Outlet		Mixer Tap Long Outlet
Colour	White				
Hose Connections	12 mm	½" Threaded	12 mm	½" Threaded	12 mm
Materials in Contact With Fluid	Body: ABS, Spout and Valves: Acetal, Seals: Neoprene				
Base Plate (mm)	113 x 55 (4 7/16" x 2 1/8")	113 x 55 (4 7/16" x 2 1/8")	164 x 55 (6 7/16" x 2 1/8")	171 x 62 (6 3/4" x 3 5/8")	164 x 55 (6 7/16" x 2 1/8")
Depth Beneath Surface	92 mm (3 1/8")	60 mm (2 3/8")	92 mm (3 5/8")	60 mm (2 3/8")	92 mm (3 5/8")
Connection to Quick Connect 15 mm	WU1512	WX1532	WU1512	WX1532	WU1512
Connection to 10 mm (3/8") Flexible Hose	WU1280 WU1204	Not Applicable	WU1280 WU1204	Not Applicable	WU1280 WU1204
Connection to 13 mm (1/2") Flexible Hose	WU1282 WU1204	WX1532 WX1584	WU1282 WU1204	WX1532 WX1584	WU1282 WU1204
Service Kits	RT9000 Micoswitch Service Kit see page 65				

Ideal for — *Use with Pressure Switch or Microswitch Systems*

User Tips — *For guide on winterization see page 64*

Please note: These taps are intended for use in freshwater systems in recreational vessels / vehicles only.

Elegance Combination Mixer Shower Unit

Combined Model with Tap and Shower Functions

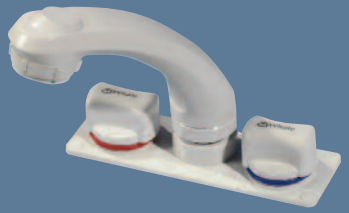
- Ideal where shower installation space is at a premium
- Retractable hose makes for neat storage when shower is not in use
- Water flow can be temporarily shut off at shower head to maintain mix setting
- One unit can be used as either a worktop mounted tap or a 'pull up style' shower
- 1.7 m (5' 7") long hose
- Connects directly to Whale Quick Connect 12 mm plumbing
- For systems operating at up to 2.4 bar (35 psi)

Model Specifications

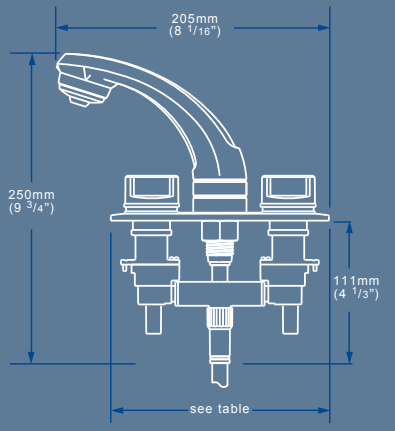
Model	RT2500	RT1470	RT2498
Description	Mixer Combination Tap / Shower with Wall Bracket	Cold Only Combination Tap / Shower	Mixer Combination Tap / Shower
Colour	White		
Hose Connections	12 mm	½" Threaded	½" Threaded
Base Plate (mm)	164 x 55 (6 7/16" x 2 1/8")	164 x 55 (6 7/16" x 2 1/8")	171 x 62 (6 ¾" x 3 5/8")
Depth Beneath Surface	108 mm (4 ¼")	80 mm (3 1/8")	80 mm (3 1/8")
Connection to Quick Connect 15 mm	WX1512	WX1532	WX1532
Connection to 10 mm (3/8") Flexible Hose	WU1280 WU1204	Not Applicable	Not Applicable
Connection to 13 mm (1/2") Flexible Hose	WU1282 WU1204	WX1532 WX1584	WX1532 WX1584
Service Kits	See page 65		

RT2500
Combination Mixer Shower Unit
1 Year Warranty

Please note: These taps are intended for use in freshwater systems in recreational vessels / vehicles only.



RT2498 / RT2010/ RT2210
Mixer Tap
Standard Outlet
Combination Mixer Shower
1 Year Warranty



RT2500
Combination Mixer Shower

RT2658 / RT2662
Swim ‘n’ Rinse
1 Year Warranty

User Tips

For guide on winterization *see page 64*

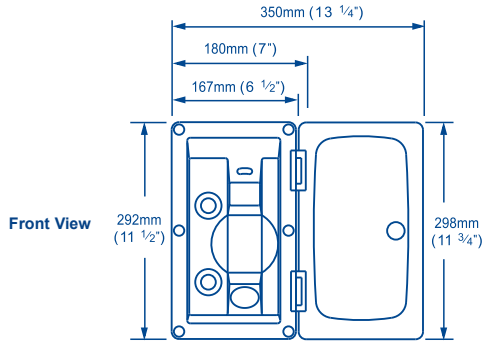
Swim ‘n’ Rinse External Shower

Mixer Shower Designed For External Use

- For easy washdown outside the R.V.
- Handset design allows water to be set to the desired temperature, minimising the amount of water wasted
- Model available with hinged cover provides a neat finish to the unit (lockable cover version available)
- Connects directly to Whale Quick Connect 15 mm plumbing see page 39
- Mounting hole 125 mm (4 $^{15}/_{16}$") X 250 mm (9 $^{7}/_{8}$")

Model Specifications

Model	Cold Only (no cover)	Cold Only (cover included)	Hot and Cold Mixer (no cover)	Hot and Cold Mixer (lockable cover included)
Product Code	**RT1648**	**RT1649**	**RT2648**	**RT2662**
Colour	White			
Base Plate	167 mm (6 ½") X 292 mm (11 ½")			
Depth Beneath Surface	88 mm (3 ½")			
Hose Connections	½" Male Threaded (BSP / NPT)			
Connection to Quick Connect 15 mm Plumbing	WX1532 - Adaptor Female ½" – 15 mm			
Hose Length	2.1 m (7 ft)			
Service Kits	AS5123 Combo handset white – AS5122 Tap / Shower Upgrade (see page 65)			



Please note:
These taps are intended for use in freshwater systems in recreational vessels / vehicles only.

V Pump

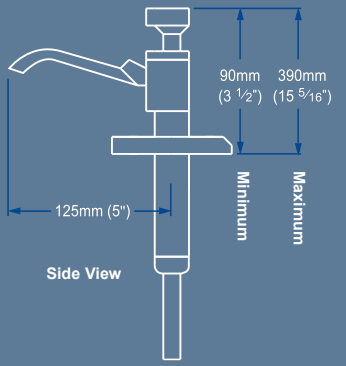
Vertical Self-Priming Hand Pump

- Ideal where space is limited
- Suitable for pumping freshwater
- Angled spout and adjustable height provide various options for installation
- Capacity is 8 ltrs per minute
- Narrow mounting base allows installation between two sinks
- Delivers a smooth flow on each stroke up and down
- Ideal as a back up pump for electric freshwater systems

Model Specifications

Model	V Pump
Product Code	**GP0650**
Hose Connections	Suitable for Quick Connect 15 mm plumbing and 13 mm (½") Flexible Hose
Weight	0.26 kg (0.6 lbs)
Materials	Pump Body: Acetal, Pump Barrel: Anodized Aluminium Alloy Seals: Neoprene, Nitrile®, Fasteners: Stainless Steel
Maximum Suction Lift	3 m (10 ft)
Maximum Discharge Head	4 m (13 ft)
Maximum Output per Minute	8 ltrs
Service Kit	AK0618 - Service Kit for V Pump, Mk 5, Mk 6, Mk 7 Models see page 65

GP0650
V Pump
5 Year Warranty



GP4618
Babyfoot® Pump
5 Year Warranty

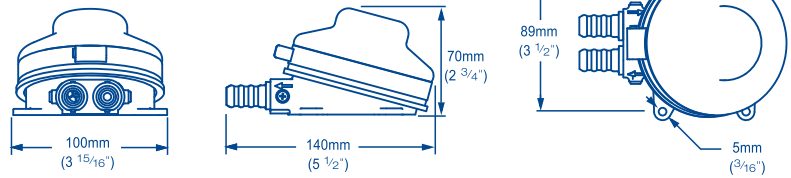
Babyfoot® Pump

Self-Priming Compact Foot Operated Freshwater Pump

- Smooth and easy operation
- Easy to install compact design
- Ideal for installation where space is limited
- Angled design ensures more comfortable operation
- Ideal as a priming pump for use with Whale In-Line electric booster pumps (see page 34)
- Suitable for pumping freshwater and saltwater

Model Specifications

Model Product Code	Babyfoot® GP4618
Hose Connections	Suitable for 13 mm (½") Flexible Hose
Weight	0.3 kg (0.7 lbs)
Materials	Pump Body: Nylon, Ports: Acetal, Seals: Neoprene Fasteners: Stainless Steel
Service Kit	AK4615 - Service Kit for Babyfoot® Pump See page 65
Maximum Suction Lift	1.5 m (5 ft)
Maximum Discharge Head	3 m (10 ft)
Maximum Output per Minute	8 ltrs



Front View **Side View** **Plan View**

Tiptoe Pump

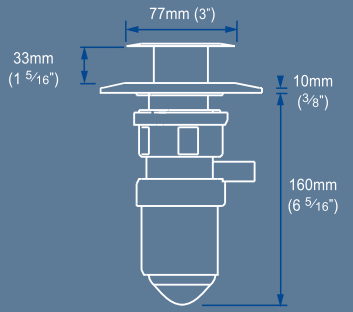
Self-Priming Foot Pump

- Smooth and easy operation
- Easy to install thru floor design
- Comfortable for bare-foot use
- Plunger safely locks down flush with floor level when not in use
- Suitable for pumping freshwater or saltwater
- Capacity is 7 ltrs (1.85 US gals) per minute
- Ideal as a priming pump for use with the Whale In-Line Electric Pumps (see page 34)

Model Specifications

Model Product Code	Tiptoe GP1309
Hose Connections	Suitable for 13 mm (½") Flexible Hose
Weight	0.4 kg (0.9 lbs)
Materials	Pump Body: Acetal, Nylon, Polypropylene Seals: Neoprene, Nitrile®, Phosphor Bronze, Fasteners: Stainless Steel
Service Kit	AK1304 - Service Kit for Tiptoe Mk 3 and Mk 4 Models See page 65
Maximum Suction Lift	2 m (7 ft)
Maximum Discharge Head	4 m (12 ft)
Maximum Output per Minute	7 ltrs (1.85 US gals)

GP1309
Tiptoe Pump
5 Year Warranty



Side View

WU7207
In Line Pressure Switch
1 Year Warranty

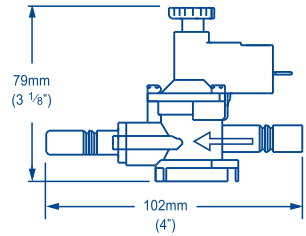
In-Line Pressure Switch

Allows Regulation of the Pressure in your Water System

- Adjustable cut in / cut out pressure setting
- Suitable for installation into 12mm Whale Quick Connect or ½" flexible hose systems
- Controls the pump turning it on and off by sensing changes in water system pressure
- Recommended for use with Whale submersible and in-line booster pumps (see pages 32 - 34)

Model Specifications

Model	Pressure Switch
Product Code	WU7207
Weight	0.063 kg (0.14 lbs)
Hose Connections	Suitable for Whale Quick Connect 12 mm and 10 mm (⅜") Flexible Hose
Current Rating	10 amp: 12 V d.c. systems 5 amp: 24 V d.c. systems
Maximum Pressure	2 bar (30 psi)
Materials	Body: Acetal, Seals and Valves: Nitrile®, EPDM Spring: Phosphor Bronze, Fasteners: Stainless Steel
Service Kits	AK7208 - See page 65



Side View

Plan View

User Tips

For guide on adjusting see page 61

- *Direction of arrow indicates the direction the water should flow*
- *Pressure Switch must be set when running on battery power (12V d.c.)*

Surge Damper

Smoothes Water Flow

- Helps reduce noise and pulsations in the water system
- Protects the pressure switch in pressurised systems
- Suitable for installation into soft hose system
- Supplied complete with mounting clips
- Designed to be mounted in a vertical position
- Connects directly in-line to Whale Quick Connect Plumbing
- For typical installation see page 41

Model Specifications

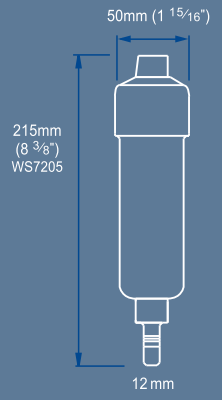
Product Code	Pipe System Used	Fitting Required
WS7205	Quick Connect 12 mm	Connects Directly Using Whale Quick Connect 12 mm Fittings
	10 mm (⅜") Flexible Hose	Stainless Steel Hose Clips

Capacity	150 ml (¼ pint)
Maximum Pressure	4 bar (60 psi)

User Tips

- *Install as close to the outlet of the pump as possible or as close to the outlet side of the pressure switch (WU7207). See page 44.*

WS7205
Surge Damper
1 Year Warranty



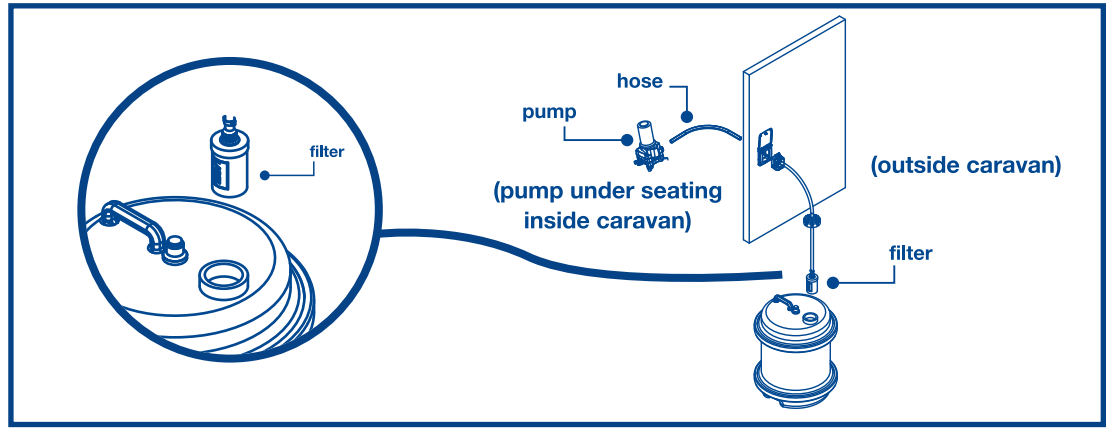
Front View

WF3000
AquaSmart® Water Filter
1 Year Warranty

AquaSmart® Water Filter

Removes unpleasant tastes and smells from water

Typical Installation



- Simply lift out of water container and twist off / on to replace
- 3000 litres of filtered water
- Silverized carbon filter
- For details of the complete AquaSmart® System please see page 24

Please note: This is NOT a bacterial filter

Easy change filter

User Tips

- *It is recommended that you change your AquaSmart® water filter every 3000 litres or after approx 30 days of use as smells and debris will build up in the filter and effect the pump's performance*
- *Allow filter to sink to bottom of water container before use*

AquaSource Clear Water Filter

For That Refreshing Taste

- Removes unpleasant tastes and smells from water from in board tanks
- Simple installation using clips supplied
- Silverised carbon filter
- Maintenance-free design
- Can be mounted vertically or horizontally
- Suitable for use with Whale Quick Connect and flexible pipework
- Lasts one full season or 4500 litres
- Installed in the freshwater plumbing pipework - usually under the sink see page 41

Model Specifications

Product Code	Pipe System Used	Fitting Required
WF1230	Quick Connect 12 mm	Connects Directly Using Whale Quick Connect 12 mm Fittings
WF1530	Quick Connect 15 mm	Connects Directly Using Whale Quick Connect 15 mm Fittings
WF1230	10 mm (⅜") Flexible Hose	Stainless Steel Hose Clips
WF1530	13 mm (½") Flexible Hose	Stainless Steel Hose Clips

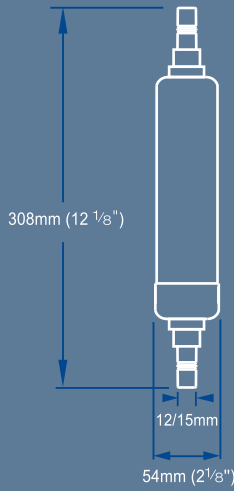
Maximum Pressure	4 bar (60 psi)

User Tips

For guide to drain the filter for winterization *see page 64*

Please note: This is NOT a bacterial filter

WF1230 / WF1530
AquaSource Clear Water Filter
1 Year Warranty



WF1230 = 12 mm
WF1530 = 15 mm

One Way Valves
1 Year Warranty

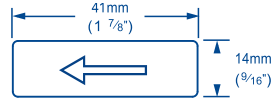
One Way Valves

Help Maintain Prime in Manual or Electric Systems

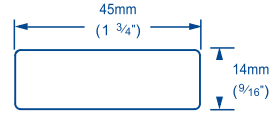
- Available in Plastic and Chromed Brass
- Ideal for use with electric submersible pumps (see page 22)

Model Specifications

Product Code	FV1227	FV1235
Hose Connections	Suitable for 13 mm (½") Flexible Hose	
Materials	Body: ABS / Chromed Brass, Spring: Phosphor Bronze, Seal: Nitrile®	
Weight	0.04 kg (0.9 lbs)	0.22 kg (0.5 lbs)



FV1227
Side View



FV1235
Side View

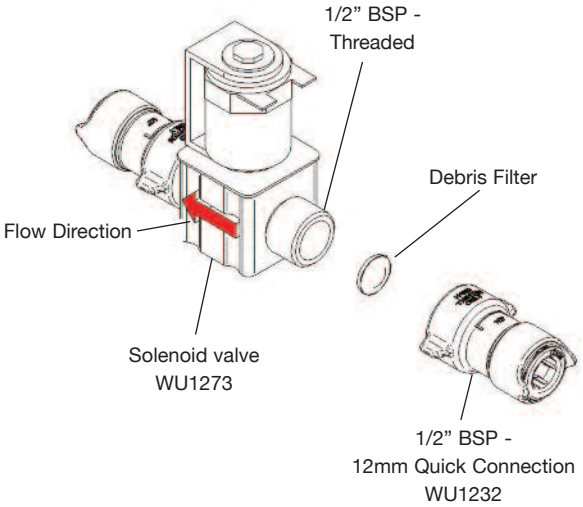
User Tips

- *Ensure the valve is installed with the arrow pointing in the direction of the water flow*
- *The one way valve is for maintaining prime over short periods of time. The low restriction design will have a small drip return.*

Electric Solenoid Valve

Solenoid Valve used for Controlling Potable Water

- Ideal for redirecting water flow for on-board tank filling
- Can be connected to existing 12 mm plumbing
- Fitted with 12 mm Whale Quick Connect fittings for direct connection
- Valves remains closed until 12 V d.c. is applied



User Tips

When installing the solenoid with a float switch for automatic tank filling cut off, we recommend that a relay is used to ensure that the solenoid current draw does not damage the float switch.

WARNING: *During operation the solenoid coil can become hot. Do not leave activated for extented periods of time (more than 15 mins) since the solenoid coil will become hot and unnecessary battery drain may occur.*

Solenoid Valve
WU1273
1 Year Warranty

Pre-Season Water System Preparation

Follow this guide to prepare your leisure vehicle for the new season

Why should I follow this Guide?

Over the winter months bacteria can grow in your water system.
Particles of minerals and dirt gather in joins and any undrained areas.
To check the system hasn't suffered any frost damage over the winter and floods your van.

After following this guide, change your water filter

If you have a Whale AquaSmart system, change your Whale WF3000 Water Filter.
If you have an in line filter in your plumbing system, Whale recommend you your plumbing system, Whale recommend you use **WF1230 Aquasource Water Filter.**

Close all drain valves in your van's water system.

Re-attach your shower head.

Ensure all taps and showers are positioned over sinks and drains.

Check condition of leisure battery, if it is below 12V please connect to mains electricity supply.

C'VAN Rinse out fresh and waste water tanks with water, add a non-caustic cleaning and purifying agent
M'HOME Add a non-caustic cleaning and purifying agent to the fresh water tank.

Completely fill your fresh water tank with tap water.

Leave the **hot** tap that is furthest away from the water heater fully open, close all remaining taps and showers.

Turn on isolation switch for water pump, normally found on the control panel or in a menu within the control panel's software.

You should hear the pump running or the pressure coming from the open **hot** tap.

Water will pop and splash as it comes from the **hot** tap, it will take some time for a flow of water to arrive as the water heater needs to fill up first.

Once an even flow is achieved, work back towards the water heater, opening the next furthest away **hot** tap until all have been opened and there is a smooth water flow.

The next stage is to close all hot water taps and open the **cold** water taps in the same order as the **hot** taps, beginning at the furthest away **cold** tap.

When an even flow is achieved through all the taps in your van close all the taps. The pump should turn off (after a few seconds if it is a pressurised system).

Remain in your van after the pump has stopped and inspect all the taps and shower heads for leaks.
You may need to dry them down first to spot any leaks). If there is access to the underside of the taps check for water leaks.

Have you found a water leak?

NO

While checking the taps and showers you may hear the pump turn on and off a few times.
If you hear this, turn on and off all the taps for 10 seconds individually to remove any trapped air from the system.

YES

If there is a water leak coming from the connections on the underside of the tap try to push them home or tighten them with a spanner depending on the connections.
If the leak originates from a crack or an unknown source check the rest of the taps and showers before turning off the water pump.Then drain the water system as the water pressure will continue to escape through the leak and will cause water damage to your van.
Contact your local dealer to rectify the leak(s).

If the pump continues to run intermittently for short bursts this can indicate a leak as pressure is being lost, Follow all the water pipes and check if there is any water leaking from joints or if a pipe is burst.

Should you find a leak at a joint, tighten the joint or push the pipe fully into the Quickfit fitting to dry up the water and wait to see if the problem persists

If you find a burst pipe or damaged tap/shower we recommend that you contact your nearest Caravan/Motorhome dealer.

After the cleaning agent has remained in the system for the required time, purge the system by running 2 or 3 full tanks of water through the system using all taps and showers in the mixed position.

Change your filter.

Finally your system is ready for use.

If you have successfully carried out this guide please check your water heater is functioning correctly, to do this please follow the manufacturers instructions. Enjoy the new season.

Note: These pre-season tips are intended as a general guide only. For servicing and product advice for your specific vehicle, contact Whale Support:
Tel: +44 (0)28 9127 0531 Fax: +44 (0)28 9146 6421 Email: info@whalepumps.com

Adjusting your Pressure Switch

Your pressure switch is factory set and should not normally require adjustment. However, adjustment may be required if the power supply voltage has varied from the previous setting, either due to battery drainage or higher voltage being supplied when the battery charger is operating. In the event that your pump doesn't switch off when you close the taps, or it pulses on and off rapidly when the taps are fully open, follow these guidelines to re-adjust the pressure switch setting.

Which Pressure Switch do you have?

In-Line Pressure Switch
Internally located within the water system pipework

Integral Pressure Switch
Located on the back of the water inlet socket

Pressure Switch Setting

Ensure the system, including the heater is full of water and all taps are closed. Refer to your user manual.

Tighten the adjusting screw clockwise until the pump comes on. (For integral socket based pressure switches, first loosen the pressure switch locknut in an anti-clockwise direction.)

Open any tap until you have a smooth flow of water, then close the tap.
You should hear the pump running and the pump running light if fitted will be on.

Return to the pressure switch and turn the pressure switch adjustment screw slowly anti-clockwise until the pump has stopped. Turn the screw a further half turn (180 degrees) anti-clockwise.

Check for correct operation by opening and closing all taps individually. The pump should turn on when the cold tap is opened and switch off immediately when the cold tap is closed. NB. There will normally be some pulsations at low flows.

The hot side may take about 10 seconds to react (both on and off) due to cushioning effect in the water heater.

For integral socket based pressure switches, carefully tighten carefully tighten the locknut until it is tight keeping the adjustment screw in position.

THREE GOLDEN RULES:
1. NEVER allow the pump to run dry
2. NEVER allow the pump to run continuously for more than 15 minutes
3. The pump assembly MUST be unplugged BEFORE putting the pump back into the refilled water container.

Please note: this Pressure Switch information is intended as a general guide only. For servicing and product advice for your specific vehicle contact Whale Support tel: +44 (0)28 9127 0531 fax: +44 (0)28 9146 6421 email: info@whalepumps.com

If setting of the pressure switch is still not correct you may experience:

Pump running continuously, even with tap closed. If undiscovered, could result in pump failure and flat battery. Most likely causes are that present voltage is significantly lower when last adjusted, or water container is empty.
CURE: Re-adjust switch or refill container

Pump does not run at all. If not due to blown fuse or faulty connections, then most likely cause is excessive continuous running (see above)
CURE: Replace pump and re-adjust switch

Pump runs intermittently ON, OFF, ON, OFF etc. Seen as pulsing flow from tap, or as inability to set constant water temperature, water goes hot, cold, hot, cold instead of constant warm. Most likely cause is that present voltage is significantly higher than when last adjusted.
CURE: Re-adjust pressure switch, if problem persists add a Whale Surge Damper (WS7205).

Pump runs very noisily but does not pump water. Likely to occur after water container has been refilled. Pump is air- locked and is fighting to get air out and water in.
CURE: Unplug from the socket, allowing pump to flood, and reconnect by plugging in again. The correct sequence when refilling the container is to unplug, put pump into container, then reconnect.

Pump continues to run for up to 30 seconds after tap is turned off. This is not a problem. This is a characteristic of pressure switch systems caused by the dampening effect of the hot water heater or surge damper on the cold side.

If after following these procedures the system continues to pulse when all taps are closed there may be a leak in the system.
Please contact Whale Support for further guidance.

Smartflo Onboard Pump Guide

WINTERISING

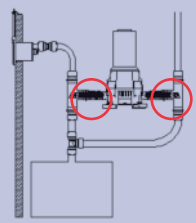
If water is allowed to freeze in the system, it can expand causing pipework and appliances to split, crack or burst. To best avoid this damage, completely drain the water system using the guideline below. Ideally carry out this procedure prior to moving the caravan / motorhome to its winter location. The movement of the vehicle will encourage residual water to drain from the system.

Ideally position the caravan/motorhome so the drain valves are at the lowest point i.e. tilt the caravan/motorhome or park on a slope.

Turn the pump off, open all taps/mixers in the mid position, including the external shower (if fitted)

Remove shower handset (including the external shower, if fitted) and shake water out.

Position manual valve handles as shown below:



Open the water heater and on board tank drain valve (if present) and leave open.

Where grey waste tanks are fitted, remove all sink plugs and open any other drain points (if present), and leave open.

External water components – shake water out of pump/AquaSource/Aquasmart filter assembly and store inside the van.

Internal pump – turn on and allow to run to expel additional water for 2 minutes.

User Tip If internal pump is accessible, disconnect outlet pipe and turn on pump to purge water into an adequate basin. Only reconnect the pump with water system is to be used.

VIBRATIONS

Higher powered onboard pumps naturally tend to be more noisy than smaller, external pumps. However, some steps can be taken to minimise this, as follows:

Regularly replace the submersible carbon filter (WF3000) at least twice a season, as excessive restrictions in the system can cause the pump to work harder.

Air in the system can cause additional noise. Refill the water tank regularly to avoid pumping air through the system, and ensure the o-rings and joints on the suction side of the system are in good condition

Ensure pipework does not vibrate against the floor or walls by moving it clear. Grey pipe insulation can sometimes be used to achieve this.

Earlier pumps where fitted with black (hard) rubber feet, grey (softer) feet which absorb the vibrations more effectively, are available as a replacement free of charge. Please contact Whale Support for details (contact details overleaf).

PRIMING YOUR SYSTEM

To maximise the performance of your pump, follow these guidelines of how to re-prime your pump every time the water supply is reconnected:

Open one hot tap (e.g kitchen sink).

Place AquaSmart carbon filter (WF3000) into the water container.

Insert plug into wall socket and close lid to lock plug in place.

Switch on 12v d.c. supply to pump

When water is flowing smoothly close hot tap and open cold tap to expel remaining air.

Repeat for all other hot and cold taps.

User Tip It is important that the o-rings on the suction side of the pump are kept in good condition and well lubricated. This will make the connection of the plug to socket easier, and will help keep the water system in good working order. To lubricate the o-rings, use a water-based lubricant such as silicone grease. DO NOT use Vaseline or cooking oil, as this will corrode the rubber.

Please note: these tips are intended as a general guide only.
For servicing and product advice for your specific vehicle contact Whale Support
tel: +44 (0)28 9127 0531 fax: +44 (0)28 9146 6421 email: info@whalepumps.com

Fault	Cause	Solution
Pump does not run	No power to pump	Check power supply Attach leads/clean connections
	Fuse has blown	Replace fuse-Do not exceed recommended fuse size of 5 Amp automotive
	Blockage in pipework	Check pipework for kinks
Pump runs but no water appears	No water getting to pump	Check that water tank is not empty Check strainer is not blocked Check all connections from tank to inlet of pump are secure - any air leaks will prevent prim
Water leaking at outlet side of pump	Check pipework /fittings for leaks and repair	Pump runs but will not switch off
	Water leaking at outlet side of pump	Check pipework /fittings for leaks and repair Check system drain plugs are closed
	No water	Check water supply level
Pump cycles on and off periodically when all taps are closed. (Normal with a partially opened tap)	Water leaking at outlet side of pump	Check pipework/fittings for leaks and repair Check system drain plugs are closed
	Leak Back	Possibly caused by dirt particles in the valves. This may be cleared by flushing through with clean water. Alternatively, the pump head can be disassembled and the valves carefully cleaned. Pump cycles on and off excessively when tap/s are open
	Excessive back pressure	Check pipework for kinks and filters etc are clear Check shower rose/taps for blockage and repair
Noisy Operation	Pump drawing air	See cause 'No water getting to pump' (see above)
	Noise created by vibration	See overleaf
Low flow	Bore of pipework connection too small	8.5 mm minimum bore recommended Check for kinks in pipework Check pipework is not blocked
	Power supply to the pump	*Check power supply to pump uses correct gaugewire (2.5mm2/AWG 13) to give full voltage at pump Check battery is not discharged
	Pipework /connections crushed	Replace damaged connections due to overtightened jubilee clips
	Pump too far from water tank	Pump should be situated beside water tank
	Water leaking at outlet side of pump	Check pipework/fittings for leaks and repair Check system drain plugs are closed
	Pump strainer clogged	Remove clear lid, rinse and replace to main strainer body (retain strainer mesh to lid)

SERVICING

Smartflo Onboard Pressure pumps are robust products that experience few failures. Most problems that occur can be cured by following the trouble shooting instructions below which may help you diagnose the fault and provide a solution:

User Tips

Using and Changing Your Water Filter (WF3000)

It is recommended that you replace your water filter twice a season, after 30 days of continuous use or 3000 litres of water.

Simply twist off to change the filter. When fitting your filter to your water inlet socket the carbon container should always be placed into the water before pushing connection into the socket. This minimizes the risk of trapped air when fitting.

After fitting a new filter, elements of carbon may appear in your water, run a generous amount of water through the system until the water runs clear.

User Tips

User Tip Service Kits

There are three serviceable components for the Smartflo:

1. AK1318 - Full Head Assembly Replacement
2. AK1317 – Microswitch Replacement
3. AK1320 – Inlet Strainer Replacement

Getting Ready for the Winter

Do you own a Caravan or Motorhome?
Ensuring that all water is removed from the caravan/ motorhome's pipework, taps and appliances will reduce the risk of frost damage occurring. Frost damage can occur when water left in the system freezes and expands, causing pipework and appliances to split, crack or burst.

Ideally position caravan/motorhome so the drain valves are at the lowest point i.e. tilt the caravan/motorhome or park on a slope.

Turn the pump off.

Open all taps/mixers in the mid position, including the external shower (if fitted).

Remove shower handset (including the external shower, if fitted) and shake water out.

Open water heater drain valve and leave open.

Open on board tank drain valve (if present) and leave open.

Where grey waste tanks are fitted, remove all sink plugs and open the drain tap.

Open any other drain points (if present).

External water components - shake water out of pump/AquaSource/Aquasmart filter assembly and store inside the van.

Internal pump - turn on and allow to run to expel additional water for 2 minutes.

If internal pump is accessible disconnect outlet pipe and turn on pump to purge water into an adequate basin. Only reconnect pump when water system is to be used.

Before following this guide, ideally carry out this procedure prior to moving the caravan /motorhome to its winter storage location. (The movement of the vehicle will encourage residual water to drain from the system).

USER TIP
If mains electric hook up is available and a Whale Space Heater is fitted select 500w electric (~) and set temperature to frost protection.

USER TIP
Fully drain /empty holding tank and flush tank of toilet in accordance with the manufacturer's instructions.

USER TIP
Ensure the gas is turned off at the bottle.

USER TIP
Do not close the fridge door tightly, leave ajar to prevent mildew forming.

USER TIP
To maintain the battery periodically charge throughout the winter.

*Please note: Where 'wet' heating systems are fitted, please refer to the manufacturer's instructions for winterising. These winterising tips are intended as a general guide only.
For servicing and product advice for your specific vehicle, please contact Whale Customer Support:

Tel: +44 (0)28 9127 0531 Fax: +44 (0)28 9146 6421
Email: info@whalepumps.com www.whalepumps.com

***Please note:** this winterising information is intended as a general guide only.*
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tel: +44 (0)28 9127 0531 fax: +44 (0)28 9146 6421 email: info@whalepumps.com

Service Kits and Accessories

Space Heater Accessories

Flue Pipe Range:

FK2075 0.75m Flue Pipe
FK2125 1.25m Flue Pipe
FK2020 2m Flue Pipe

Ducting Fittings Range:

DX6501 End Cap Fitting
DX6502 Straight Fitting
DX6503 Tee Fitting
DX6504 Y Fitting

Vent Range:

DX6511 Directional Fitting (Beige)
DX6521 Directional Fitting (Black)
DX6531 Directional Fitting (Cream)
DX6516 Fixed Fitting (Beige)
DX6536 Fixed Fitting (Cream)
DX6526 Fixed Fitting (Black)

Water Heater Accessories

AK1203 Universal Adapter Plate
AK1202 Control Unit Extension Cable

Electric Pump Service Kits

AK1318 Smartflo Replacement Pump Head

AK8834 Watermaster Service Kit
Contains 4 O Rings
1 O Ring
1 Diaphgram
2 Non Return Valves

AK1317 Universal Microswitch Kit
Contains 1 Microswitch

AK1320 Smartflo Strainer Service Kit
Contains 12mm Smartflo Quick Connection
Filter Assembly

AS5005 Watermaster Socket Microswitch Service Kit
Contains 1 Microswitch
1 Microswitch Contact Strip

AS8090 Superfil - Plug & Gasket Service Kit
Contains 1 Plug
1 Cover & Gasket

AS8092 Superfil - Socket & Gasket Service Kit
Contains 1 Socket
1 Cover & Gasket

UH0814 Aquasmart plug and Filter Combo

Manual Pump Service Kits

AK0618 V Pump Service Kit
Contains 1 Handle Buffer
1 Cup packing
1 Buffer
1 Valve
1 Valve Stem
1 Gland U Packing
3 O rings

AK1304 Tiptoe
Contains Washers
Valve Plates
Circlips

AK4615 Babyfoot Pump Service Kit
Contains Diaphgram
Valves
O Rings
Springs
Fasteners

Elegance Taps & Showers

AK5030 Tap/Shower Service Kit
Contains 8 O-Ring
2 Valve Washer
4 Screw Cover - White
4 Screw Cover - Large White
4 Screw Cover - Beige
4 Screw No.6 csk
4 Screw No.6 pan

AS5122 Tap / Shower Upgrade Kit - White
Contains 2 Knobs + Spindles
1 Ring - Blue
1 Ring - Red

AS5123 Combo Handset - White
Contains 1 Handset
1 O-Ring

AS5020 Elegance Short Outlet - White
Contains 1 O-Ring
1 Gland Screw
1 Combo Shower Head

AS5125 Elegance Long Spout - White
Contains 1 O-Ring
1 Gland Screw
1 Handset

RT9000 Microswitch Service Kit

AS5145 Shower Hose Kit - white
Contains 2 O-Rings
1 1.5 m Hose Assembly

AS5147 Shower Hose 2.1m - White
Contains 2 O-Rings
2 2.1 m Hose Assembly

AS5149 Shower Hose Connection Service Kit - White
Contains 4 O-Ring
2 Outer Collar
2 Hose Ferrule

AS5623 Combo Handset - Beige
Contains 1 O-Ring
1 Handset

AS5625 Elegance Long Spout - Beige
Contains 1 O-Ring
1 Gland Screw
1 Handset

AS5089 Elbow Single Tap Service Kit
Contains 1 Elbow Piece Assembly

AS5626 Tap / Shower Upgrade Kit - Beige
Contains 2 Knobs and spindles
1 Ring - Blue
1 Ring - Red

AS5146 Shower Hose (1/2'' BSP) - White
Contains 1 1/2"-3/8" Bsp Shower Hose 2.1m -1.7m

AS5148 Hose for Swim'n'rinse
Contains 1 1/2"-3/8" Bsp Shower Hose 2.1m

AS5050 Shower Elbow Service Kit
Contains 1 Ring
1 Shower Elbow
1 O-Ring

AS5645 Shower Hose Kit - Beige
Contains 4 O-Rings
1 Shower Socket
1 Bush
1 Hose 1.5m
2 Outer Collar
2 Hose Ferrule

AS5649 Shower Hose Connector - Beige
Contains 4 O-Rings
2 Outer Collars
2 Hose Ferrule

Elite Taps & Showers Spares Kits

AK6310 Replacement Spout - Chrome
Contains 1 Nozzle
2 O-Rings
1 Spout

AK6350 Replacement Spout - White
Contains 2 O-Rings
1 Nozzle (Gold)
1 Spout

Accessories

AK7208 In-Line Pressure Switch Service Kit
Contains 1 O ring (valve)
1 Valve Stem
1 Microswitch
1 Valve Spring
1 O ring (tailpiece)
1 Diaphram
1 Valve

AK7209 Inline Pressure Switch Service Kit (for grooved stem version - suitable for 12mm Quick Connecter)
Contains 1 O ring (valve)
1 Valve Stem
1 Microswitch
1 Valve Spring
1 O ring (tailpiece)
1 Diaphram
1 Valve

EM9402 Aquasource Mains Connection
Contains Adaptor to connect to service towers

EM9403 Aquasource Mains Extension
Contains 7.5m lay flat mains hose
3 Hose fitting connectors

EM9406 Aquasource Mains Connector
Contains 1 Push fit female mains connector
1 Tap connector

EM9407 **Aquasource Plug Adaptor**

Contains Adaptor compatible with Truma Crystal II® and Compact® Sockets

AS8836 **Dual Connector Plug Assembly Kit**
Dual Connector Kit

Contains 1 Retaining Screw
2 O-Rings
1 Plastic Plug
4 Screw Grubs
4 Contact Pins

AS8839 **Cap and Gasket Dual Connector**

Abbreviations

ABS	Acrylonitrate – Butadiene – Styrene
BSP	British Standard Pipe Thread
Ft	Feet
Kg	Kilograms
lbs	Pounds
ltrs/min	Litres per Minute
ltrs	Litres
mm	Millimetres
m	Metres
PBT	Polybutylene Terephthalate
PVC	Polyvinyl Chloride
V d.c.	Voltage (Direct Current)
“	Inches

MUNSTER SIMMS ENGINEERING LIMITED AND WHALE WATER SYSTEMS INC
(a subsidiary of Munster Simms Engineering Limited) ("Company")

STATEMENT OF LIMITED WARRANTY

The products manufactured and supplied by the Company ("**Products**"), are warranted to be free from material defects in design, workmanship and material under normal use ("**Defects**") for (unless otherwise extended in advance in writing by the Company) a period of 12 months from date of purchase, save that this warranty shall not apply where the Defect is attributable to defective materials supplied by third parties. In such event, the only remedy of the buyer of the Products ("**Buyer**") will be against that third party.

This warranty applies only to Products that are properly installed and used in accordance with all oral and written maintenance and operation instructions provided by the Company. The Company shall not be liable for a breach of any of the warranties in this Statement of Limited Warranty if the Buyer makes any further use of the Products after giving the Company notice of any Defect or the Buyer alters or repairs such Products without the written consent of the Company. Products that have been disassembled or modified (without prior written approval of the Company), are not covered by this warranty.

All Products are covered by a 1 year limited warranty (detailed below) from (unless otherwise extended in advance in writing by the Company) date of purchase ("**Standard Warranty**"). In addition to the Standard Warranty, some individual Products are covered by a further warranty, as detailed in Table 1 below ("**Additional Warranty**").

In the event that any of the warranties offered by the Company are breached, the Company shall (at its discretion) repair, replace or issue a spares kit for the defective Product subject to prior examination at Company premises. If the Company complies with this paragraph, it shall have no further liability for a breach of the warranties in respect of such Products. Adjustment or replacement of defective parts made under this warranty will not extend the warranty period applicable either under the Standard Warranty and/or the Additional Warranty.

The Company shall not bear any costs of removal, installation, transportation, or other charges that may arise in connection with a warranty claim by the Buyer. Such costs shall be the Buyer's sole responsibility.

No claim in respect of defective Products will be valid unless the alleged defective Products are returned at the Buyer's expense to the Company for inspection, together with proof of purchase. Non-stock/ special order items are non-returnable by the Buyer in any circumstances, and this warranty does not apply to prototype models.

* Illustrations for guidance only

EXCLUSIONS:

The Company shall not be liable for any indirect loss or for any special, incidental, punitive or consequential damages suffered by the Buyer and/or any third party, whether this loss arises from breach of a duty in contract or tort or breach of a statutory duty or in any other way, including, without limitation, loss arising from the negligence, default, breach of duty, non-delivery, delay in delivery or defects or errors in the work undertaken by the Company pursuant to the terms of this Statement of Limited Warranty or in connection with any other claim arising in connection with manufacture and/or supply of the Products.

In particular, the Company shall not be liable (without limitation) for:

- Loss of profits, increased production costs or other economic injury or loss;
- Loss of contracts or opportunity; and/or
- (insofar as is permitted by applicable law) damage to property of the Buyer or any third party.

The Company shall under no circumstances be liable for any breach of its obligations hereunder and/or under any contract governing sale and purchase of the Products ("**Contract**") resulting from causes beyond its control including but not limited to fires, strikes, lockouts, insurrection or riots, terrorism or civil disorder, embargoes, wrecks or delays in transportation, requirements or regulations of any governmental authority, tempest, earthquake or other natural disaster, flood, bursting or overflowing of water tanks, failure or shortage of power, fuel or other utilities, or loss of data and/or communications due to causes such as those referred to in this paragraph.

This statement sets out the Company's entire liability in respect of the Products and the Company's liability under this statement shall be in lieu of all other warranties, conditions, terms and liabilities, express or implied, statutory or otherwise howsoever except any implied by law which cannot be excluded.

All warranties, conditions and other terms implied by statute or common law (save for the conditions implied by section 12 of the Sale of Goods Act 1979) are, to the fullest extent permitted by law, excluded from the Contract.

Subject to the remaining provisions of this Statement of Limited Warranty, the Company's total liability in contract, tort (including negligence or breach of statutory duty), misrepresentation, restitution or otherwise, arising in connection with the performance or contemplated performance of the Contract and supply of the Products shall be limited to the Contract price.

Nothing in this Statement of Limited Warranty shall operate so as to exclude or restrict the Company's liability for death or personal injury caused by its negligence. The Company shall NOT be liable for any condition, warranty or representation made by a distributor or other person acting on behalf of the Company unless expressly confirmed by the Company in writing.

This Statement of Limited Warranty shall be governed and construed in accordance with Northern Irish law and all disputes arising in connection hereto shall be submitted to the exclusive jurisdiction of the Northern Irish Courts.

Table 1:

Product type	2 years	3 years	5 years	10 years
Universal Series Pump	✓			
Chromed metal taps (TT)	✓			
Smartbail Bilge Pump		✓		
Orca Bilge Pump		✓		
Supersub Bilge Pump		✓		
Space Heater / Water Heater		✓		
Manual Bilge Pump			✓	
Manual Freshwater Pump			✓	
Manual Toilet Pump			✓	
Quick Connect Plumbing fittings				✓
WhaleX tubing				✓

The period of such Additional Warranty shall commence automatically the date the Standard Warranty expires.

Note that these periods may be further enhanced through special offers, or revisions. Please see your product documentation for details.

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Copyright Whale 2012

All rights reserved. Whale is a registered trademark of Munster Simms Engineering

Limited,Bangor Northern Ireland trading as Whale. Whale's policy is one of continuous improvement and we reserve the right to change specifications without prior notice. Illustrations are for guidance purposes only.

Please note that by contacting Whale Support you will be indicating your consent to receiving product updates, recall information, help guides and appropriate marketing messages from us via post, email or telephone unless you indicated an objection to receiving such messages.

DISCLAIMER

All Products are rated and appropriate for use with water unless otherwise specified by the Company. Compatibility and suitability for other liquids should be verified in writing by the Company prior to such use. All specification information on Products included in Product literature is based on tests using clean cold water unless otherwise specified. Any performance / specification figures shown have been calculated using standard testing procedures. Where maximum output is stated, such maximum output refers to pumps acting at zero lift and zero head. Actual performance may vary depending on the application, installation and environmental factors. Neither the accuracy nor completeness of the information contained in any Product brochure is guaranteed by the Company and may be subject to change at its sole discretion. The Company may, at its sole discretion, change the technical performance, dimensions or appearance of any of its Products without prior notification to purchasers. The Company shall not be liable to a purchaser for any indirect or consequential loss or damage (whether for loss of profit, loss of business, depletion of goodwill or otherwise), costs, expenses or other claims for consequential compensation whatsoever (howsoever caused) which arise out of or in connection with the use of a Product. Where dimensions are stated, such dimensions are for guidance only. Inch measurements are conversions from millimetre dimensions and are shown to the nearest 1/16". US gallons volumes are conversions from litres and are also shown for guidance purposes only to the nearest 1/16. Please contact the Company directly if precise measurements are required.

Please note: All products shown in this brochure are designed for use in caravan / recreational vehicles and are not suitable for installation in domestic applications. Unless otherwise stated in your manufactures' user information.

Whale's policy is one of continuous improvement and we reserve the right to change specifications without prior notice. Illustrations are for guidance purposes only.

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Whale® is a registered trademark of Munster Simms Engineering Ltd, trading as Whale®

Please note that by contacting Whale Support, you will be indicating your consent to receiving product updates, recall information, help guides, and appropriate marketing messages from us via post, email or telephone unless you indicated an objection to receiving such messages.

Santoprene® is a registered trade name of Advanced Elastomer Systems, LP, an Exxonmobil Chemical Affiliate
Delrin®, Teflon® and Neoprene are registered trade names of Dupont Neumeurs and Co.
Monprene® is a registered trade name of Technore Apex
Truma® Crystal II® Compact® are registered trade names for Truma GmbH & Co.

Affiliations and Accreditations

Recreational Vehicle Builder Technical Partnership

Our technical support team of highly skilled engineers work in partnership with recreational vehicle builders around the world.
This collaboration delivers bespoke systems that are ideal for each builder, saving both time and money.

Quality Assurance

All Whale electrical products have the appropriate CE Mark, hence conforming to the relevant European Union Standards.
It is not advisable to install electrical products which do not carry the CE Mark.

Our company aims to consistently provide the highest quality products and customer service, delivered through efficient engineering and production processes. Our success has been recognised through gaining ISO 9001:2008, Quality Management System and ISO14001:2004, Environment Management System and BS OHSAS 18001: 2007 Health and Safety Management System.

Whale Trade Names

Whale®, Babyfoot®, AquaSmart®, Smartflo®, I Van™, Whale IC™, Watermaster® are trade names of
Munster Simms Engineering Limited, Bangor, Northern Ireland. (Also trading as Whale)

Patent and Design Registration Applications

SPACE HEATER / WATER HEATER RANGE pages 14 to 23 - International PCT Patent Application WO 2011/029826.

WHALE WATER HEATER RANGE pages 20 to 23

DUAL ELECTRICAL ELEMENT WITH SINGLE THERMOSTAT

Patents pending in Europe (10705275.5), Australia (AU 2010213125) and New Zealand (NZ 595169).

WATERMASTER page 30 to 31 - Patents pending in Europe (11184422.1) and the United Kingdom (1117353.1).

AQUASMART page 24 to 25 - This product is protected by the following granted patent: United Kingdom Patent No. GB 2 409 703.

AQUASOURCE page 35 to 57 - This product is protected by the following granted patent: United Kingdom Patent No. GB 2 289 747.

WATERMASTER IC page 12 to 13 - Patents pending for water supply for a mobile home in UK patent no. GB2409703B.

NORTHERN IRELAND QUALITY AWARD

NATIONAL CARAVAN COUNCIL LIMITED

INVESTOR IN PEOPLE

GB07/72122 GB94/3543 GB04/62920

The Caravan Writers Guild

THE SUNDAY TIMES 100 BEST SMALL COMPANIES TO WORK FOR 2010

THE SUNDAY TIMES 100 BEST SMALL COMPANIES TO WORK FOR 2011

THE SUNDAY TIMES 100 BEST SMALL COMPANIES TO WORK FOR 2012

Customer Support Services

Whale employees are committed to providing excellent customer service, product installation and maintenance advice.

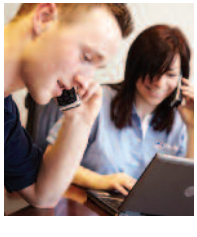
Whale Customers Say...

"It is very reassuring in this cut throat, profit pushing world to find a company like yours that not only talks about customer satisfaction but strives to make this happen."
Cyril Hucker, Caravan Owner

"I find it very refreshing that Whale water systems obviously cares for its customers over the smallest detail." Geoffrey Beaven

"It is refreshing to find a manufacturer, that not only supplies first rate products but also gives excellent back-up service..." Brian Jarvis (Caravan Owner)

"This has got to be the finest after sales service I have experienced. What a superb company to deal with." Rodney Grainger, Caravan Owner



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